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AN INVITATION

AMERICAN ARTISAN courteously invites and urges you to participate in the privileges and benefits of its Service Department. Any phase of the warm air heating and sheet metal industries or stove sales and window display questions may be profitably and instructively discussed in this department. If your problem is a knotty or technical one, submit it to the Service Department and secure the benefits of the opinions of other men. It is an exchange information department, and you are asked to relate your accomplishments and tell how you have surmounted difficulties. Wherever possible rough sketches or photographs should accompany the questions or suggestions, as they always make clear the points involved. Use this Service Department freely; it is yours.

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, Pages 48-50-52

Sell the Profitable and Easily Erected
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Send for our 1924 Furnace Catalog and Dealer Proposition

UTICA HEATER COMPANY
 UTICA, New York

218-220 West Kinzie Street, CHICAGO, ILL.

Two Million and a Half Kitchen Ranges Will Be Bought in 1924—Sell Your Share!

THE average life of a kitchen range is less than fifteen years.

There are, of course, many well made and well treated ranges that last much longer, but it is nevertheless a fact that every one of the twenty-two million ranges now in use must be replaced within the next fifteen years, so far as numbers go, although many of those which were bought fifteen years ago will still be in service and operating satisfactorily.

This means that from a replacement standpoint, there is a market for a million and a half ranges every year.

In addition, we have the fact that more than one million newly married couples go to house-keeping every year.

So that there should be a ready sale for something like two and a half million ranges in 1924.

Speaking in percentages, this means that for every 5,000 population there is a sale for 115 ranges—this year and increasing every year following.

But many of these 115 ranges will not be sold, because of lack of enterprise and aggressiveness on the part of so many retail sellers of stoves and ranges. At least, they will not be sold by those who, by their location, should be the ones to sell them, although they may be sold by "stove peddlers" or mail order houses.

For the day has gone by when stoves and ranges can be sold profitably by waiting for people to come in and buy, without solicitation of some sort.

It may be by letters or mailing cards; it may be by newspaper or circular advertising; it may be by billboards; it may be by personal canvas; it may be by a combination of two or more of these methods—but without going after business aggressively the volume of sales will neither justify the carrying of a reasonably sized stock, because the returns, in shape of net profits, will not pay for the investment.

On the other hand, the stove merchant who

lives up to his opportunity, seeks out real prospects and keeps after them, will secure more than his normal share of the stove and range business, with its additional net profits.

And he will not be acting in an unfair manner toward his fellow merchants.

On the contrary, he will be rendering them a service by keeping the money in the community rather than allowing it to be sent away to a mail order house or stove peddling manufacturer.

And he is rendering the housewives a real service, too, because by inducing them to buy from him, he is also making it certain that if anything should go wrong—and things sometimes do go wrong even where the best of care has been taken, because of somebody's carelessness or because of accident—they can have it fixed without having to wait for an outsider to send a suggestion for a remedy: He will be on the job and have the range ready again for service on short notice.

But these 115 ranges per 5,000 population—your share of them—will not be sold unless you get busy right now—this month—and make a definite effort to close with some of your prospects and to find new ones.

And the winter months are not bad months for sales of kitchen ranges, as we have shown by numerous examples.

People will buy ranges in February as well as in August. In fact, they will buy them any day or any month you make up their minds for them to buy.

Without knowing positively the manufacturer's price of any range, we feel that we can state this as a definite fact that prices for 1924 will not be lower than they were during the fall of 1923, and they may be higher if there is a material advance in raw material prices.

So let every stove merchant who is worthy of the name, get busy and make every possible effort to secure his full share of the two and a half million ranges that will be sold this year.

No Real Benefit Is Derived from Competition Based Upon Ignorance of True Costs.

ON the opposite page is quoted the essential part of a ruling laid down last week by Harry L. Daugherty, United States Attorney General, the effect of which if sustained by the Federal Court, will be that much of the helpful work which has been done and is planned to be done by trade associations will be thrown on the scrap heap as against the anti-trust law.

Mr. Daugherty, in effect, says that if John Smith tells his fellow members in the authors' association what it cost him to produce his recently published 400-page book, he is breaking the law, because one or more of them may take advantage of this information and demand two cents more royalty from their publishers.

His ruling means that a local association of sheet metal contractors, for example, may not take up for consideration the cost figures of any contract which one of its members has already secured or finished, because to do so, Mr. Daugherty says,

"The spirit of comradeship created by this confidential exchange of information of this character necessarily prevents the free competition between them which would otherwise prevail."

Mr. Daugherty's ruling is, of course, not the final word. That can only be assured by a decision of the Supreme Court of the United States.

But until such a decision is rendered, the ruling may interrupt some of the good work which such organizations as the National Association of Stove Manufacturers, the Midland Furnace Club, the National Association of Washing Machine Manufacturers, the National Retail Hardware Association, and many others have been doing, and by which conditions, basically wrong, have been materially improved—with benefit not only to those directly involved, but also to the general public.

For example, in a local association of sheet metal contractors, the matter of gutter hanging may have been discussed from a cost

standpoint. A member may have been doing this work at a price which was too low to yield him a profit. His price may have become the basis for contracts with other shops, with the result that none of them made any profit on such jobs.

Invariably, the quality of the goods and the grade of the work becomes poorer, and within a short time the public arrives at a point where it pays good money for a poor job or a poor article. There is no exception to this rule, whether Mr. Daugherty tries to make his ruling stick or not.

On the other hand, by a free discussion of the items which enter into the cost of hanging the various types of gutters, the contractor who has been doing the work without profit, or at too low a profit, is brought to see the necessity for demanding a higher price—one that will yield him a reasonable profit.

But Mr. Daugherty says that trade associations must be prohibited from distributing such information among their members. To be sure, they are allowed to gather the information,

*"Provided it be strictly guarded" * * * and * * * "distributed through a responsible medium, like your (Commerce) Department."*

When Edward N. Hurley was Chairman of the Federal Trade Commission, trade associations were encouraged to engage in spreading the gospel of "True Costs," because it always resulted in benefit to the ultimate consumer, as well as to the men engaged in the trade or industry under discussion, but now Mr. Daugherty says that they must not do what Mr. Hurley said was good business.

Mr. Hurley is a successful business man. We are inclined to believe that Mr. Daugherty's ruling will be classed as a very poor interpretation of a statute which in many respects has long outlived its usefulness as evidenced by the failure, so far as actual results go, of the many suits entered by the Department of Justice.

Federal Attorney-General Daugherty Rules Against Distribution of Cost Data by Trade Bodies.

Maintains That Such Information Is Likely to Result in Stifling Natural Competition.

TRADER associations may legally collect and turn over to the commerce department statistics concerning production and distribution, as well as prices of the commodities with which their industries deal, Attorney Daugherty has informed Secretary Hoover. They may not, however, circulate such data among their own memberships.

The department of justice, Mr. Daugherty said, would consider such private circulation contrary to the anti-trust act.

"In my judgment the effect of general information as to the conditions of an industry," the attorney general said, "such as the total production, shipments, stocks on hand, and the average price or range of prices, is entirely different from that resulting from each person engaged in an industry receiving directly, or through a common medium, reports which reveal to him the exact condition of the business of all of his competitors.

Provides Unfair Advantage.

"When thus informed, each one is invited, and is naturally inclined to imitate the conduct of his most successful competitor; and the spirit of comradeship created by the confidential exchange of information of this character necessarily prevents the free competition between them which would otherwise prevail.

"Those who organize and conduct these associations appear to entertain the idea that if the information imparted relates only to past and closed transactions there can be no violation of the anti-trust act. Such an idea is wholly fallacious.

Could Not Trust Each Other.

"It has developed in the trial of cases involving associations that the members first agreed upon prices, but such a plan did not work because the members could not be relied upon to keep the agreement,

and the system of exchanging statistics was adopted because it was found to be the only effective way to procure cooperation as to prices and production, and such cooperation would be thus procured even in the absence of any positive agreement.

"Again the idea seems to be prevalent that no exchange of information between the members, regardless of its extent or character, can be unlawful if at the same time publicity be given thereto through the press or some governmental agency."

Not Relieved by Publicity.

"In my judgment this idea is likewise fallacious. The illegality as well as the evil results arise from the cooperation among the members pursuant to a positive or tacit understanding, and this cooperation is not affected by publicity.

"Information should be distributed strictly through a responsible medium, like your (commerce) department; and I see no objection to its being gathered by an association, provided it be strictly guarded and the association be prohibited from distributing it among its membership."

Just What Tax Reductions the Mellon Plan Proposes.

Here is a composite compilation of the proposed Republican tax reduction bill popularity known as the Mellon tax bill.

The Mellon bill, first, would allow a 25 per cent reduction of taxes on "earned income," that is, on wages, salaries and professional fees, in contrast to dividends, interest, etc. It would reduce the normal tax on the first \$4,000 of net income from 4 to 3 per cent and upon the remainder of the net income from 8

to 6 per cent. It would not begin the surtax rates below \$10,000.

Under this arrangement a single person without dependents and with an income of \$3,000 a year would pay only \$22.50, as against \$40 at present. Such a taxpayer with a total income of \$4,000 would have his taxes reduced from \$80 to \$45. The \$5,000 income would pay \$67.50 instead of \$120; the \$6,000 would pay \$135 instead of \$240, and so on up to \$10,000, which would pay only \$270 instead of \$510. The head of a family with two dependent children wouldn't pay at all if he earned only \$5,000. If he earned \$6,000 he would pay \$15.75 instead of \$28, and so on up to \$234 instead of \$456 if he had a net earned income of \$10,000 above exemptions.

The fact that relief of higher taxpayers would stimulate business and prosperity, and thus make substantial incomes more certain for wage and salary earner, making it easier for them to pay their reduced taxes, is an incidental argument, equally sound, perhaps more important, but not so easily understood as the plain fact that the Mellon plan would cut taxes on earned incomes up to \$10,000 almost in half.

"The supply of time is truly a daily miracle, an affair genuinely astonishing when it is examined. You wake up in the morning and lo! your purse is magically filled with twenty-four hours of the unmanufactured tissue of the universe of your life. It is yours. It is the most precious of possessions. No one can take it from you. It is unstealable, and no one receives either more or less than you receive. Talk about an ideal democracy. In the realm of time there is no aristocracy of wealth and no aristocracy of intellect. Genius is not rewarded by even an extra hour a day.

Random Notes and Sketches.

By Sidney Arnold

The other day while I was chatting with R. W. Menk, he gave me the following clipping from the *Chicago Journal*, a "contribution" from J. P. McEvoy, which I am sure will be appreciated by many of my friends.

Furnaces.

A furnace is a contrivance that takes in coal and gives out smoke, dust and ashes. It is designed to make you warm, especially under the collar, and is most ingeniously contrived to generate warmth on hot days and coolth on cold days.

Furnaces are very sensitive to atmospheric conditions. At the first symptom of a cold snap they become paralyzed, roll over on their backs, curl up in a hard knot, and refuse to function. When spring comes down on the world again they regain their gaiety and get all het up with enthusiasm and vitality.

Furnaces are usually situated down in the basement next to the janitor's apartment, so as to keep him comfortably warm, first and foremost. How well they illustrate the old maxim: "Out of sight, out of luck." They burn hard coal, soft coal or coke; it makes no difference which, except in the bills. It is called hard coal because it's hard to get and hard to take at the price when you get it. Coke is coal with a past—it has seen life and has had most of the stuffing knocked out of it.

Furnaces are regulated by thermostats, which is from the Latin "thermo," meaning heat, and "stat," an abbreviation of "statso?"

There are hot-water furnaces, hot-air furnaces and steam furnaces—some of them can be kept supplied with coal if a man shovels madly twelve hours a day and has someone to spell him on the night shifts.

Our forefathers never knew the joy of running a furnace. All they had in their artless simplicity was a log fire about the size of a 4-11

alarm, which kept them toasted a light brown all winter. Among those who do not know what a furnace is are Laplanders, Yaplanders (inhabitants of the Island of Yap), south sea islanders, and families who live on the third floor.

* * *

"There is an old saying to the effect that Opportunity knocks at a man's door, and receiving no response, departs and returns no more. As a matter of fact, Opportunity hammers away at a man's door as persistently as a woodpecker hammers a telegraph pole. Don't wait for the big Opportunity: accept the little ones offering every hour of the day: opportunity to be polite to a customer, instead of making him an enemy with unnecessary rudeness; opportunity to be careful; opportunity to do a hundred things you have noted that successful and useful men have a habit of doing. The big Opportunity we hear so much about is a combination of little ones we neglect. Opportunity to save a little every week amounts to a large opportunity in the course of a few years."

Good common sense, I call it. Trouble is that too many of us stand around waiting for that sledge hammer knock, when we ought to have our eyes and ears open to recognize the little fellow whose appearance may not be anything like what we thought or whose knock may be just a gentle tapping on the door.

* * *

"Motives are something that you cannot always tell about," said Bill Cover, the Cozy furnace man, who presides over the Midland Furnace Club, "such as, for example, the case of the old colored man in the rocker," and then he told this story:

A Negro called upon an old friend, who received him in a rocking chair and continued to rock himself to and fro in a most curious way.

"Yo' ain't sick, is yo', Harrison?" asked the caller anxiously.

"No, I ain't sick, Mose," said Harrison.

There was a moment's silence, during which the caller gazed wide-eyed at the rocking figure.

"Den," continued Mose, "why does yo' rock yo'self dat way all de time?"

Harrison explained:

"Yo' know Bill Blott? Well, he sold me a silver watch cheap, an' if I stops moving like dis, dat watch don't go!"

* * *

No one knows better than I the danger of words, but evidently A. B. Meston, of the Quick Furnace & Supply Company, thinks it well to impress it upon me again, for he sent in the following:

"Those firemen must be a frivolous set," commented Mrs. Dump-ling.

"Why?" asked her overworked half.

"I read in the paper that after the blaze was under control, firemen played all night on the ruins. Why didn't they go to bed like sensible folks instead of romping around like cats?"

There are some people to whom even the most innocent remark has an ulterior meaning, and the best one can do in their presence is to remain absolutely speechless.

* * *

Mother's Cooking.

Mother's cakes and pies and bread—
Let him brag and be not led
Into thinking that yours are
Less delicious—you are far
The better cook. Ah, do not fear,
It's mother's love he tastes, my dear.

Would you have it otherwise?
Your boys will your cooking prize.
Don't you want their praise and love
When you've gone to Him above—
Would you have them love you less,
Though another they caress?

Let his memory beguile—
Ask him with a loving smile.
About his mother, wondrous cook,
Who stirred up cakes without a book,
And always waited at the gate
To take his copy book and slate.

Praise his mother e'en as he,
Loved forever she should be.
Make her memory all he'd wish—
Try to cook some old-time dish,
Stirring as she did of old
The mother love which ne'er grows cold.
—Carlotta Bonheur Stearns.

Warm Air Heating Industry Given Boost by Chicago Health Department.

Claims Whole Problem Healthful and Economical Heating Depends Upon Proper Humidity Conditions.

HERE is an instance where the Board of Health of a large metropolis unknowingly plays into the hands of the Warm Air Furnace Industry, for is there any other artificial heat generator on the market today which restores the humidity of an artificially heated room so readily as does the warm air furnace? There is not.

Then read the following and capitalize upon it:

Moisture in the Air.

Proper moisture, or humidity, is not merely desirable, but is essential to health and comfort, says the Bulletin of the Chicago Department of Health. Humidity and temperature are in close relation and both must always be considered in connection with ventilation.

Long ago it was pointed out that excessive heat and moisture were probably the factors that produced the harmful effects of re-breathed air rather than its chemical composition. To determine this, experiments were made in which healthy persons were placed in carefully controlled, closed chambers until they complained of the symptoms that one is accustomed to associate with badly ventilated rooms. When they were allowed to breathe outside air through a tube, they were not relieved of the symptoms of oppression. When persons inside of the chamber were allowed to breathe the dead air from without the chamber through a tube, they did not experience relief. It became evident, therefore, that the feeling of discomfort was caused by physical rather than chemical constituents of the air breathed.

The conclusion reached was that the heat and moisture produced by human bodies in the confined space caused the feeling of discomfort by its effect on the heat regulating mechanism of the body.

The body heat, given off by per-

sons congregated in workroom, church, theater or other places of assembly, raises the temperature of the air above normal. With the increase in temperature there is also an increase in moisture, both of which interfere with the normal dissipation of heat from the body, thus producing a feeling of discomfort.

In men and warm-blooded animals the heat loss is accomplished by radiation, convection and by evaporation from the skin and lungs. This is brought about by dilatation of the blood vessels of the skin under control of the heat center of the brain. The congestion of the skin produces greater heat radiation and at the same time stimulates the activity of the sweat glands, leading to further heat loss by evaporation.

With the onset of fall and winter in this climate, there arises the necessity of living in artificially heated air, which has a profound effect upon health, because heating as ordinarily done radically changes the balance between the temperature and humidity of inside air as compared with the outdoors. It is at this time of the year that there is an increased tendency to contract pneumonia, influenza, bronchitis and other respiratory affections; and investigations have shown that one of the major factors in the increase of respiratory disease at this time of the year is the improper air conditions of the home and work rooms.

The Best Air Conditions.

It is generally conceded that health and comfort are best promoted under conditions of physical rest and an average air temperature of 66 degrees to 68 degrees with a humidity of 50 to 45 per cent. The humidity and heat must be properly balanced; that is, the lower temperature must go with the higher hu-

midity and vice versa, in order to maintain the same degree of comfort. A temperature of less than 60 degrees is more appropriate for physical activity and stimulates mental efficiency and clearer thinking than warmer temperatures, provided body warmth is maintained by suitable clothing.

When the amount of moisture in the air is very low, as is commonly the case in heated dwellings, the temperature must range above 70 degrees for comfort, because the low moisture content of the air increases the rate of evaporation from the skin, thus bringing about rapid cooling of the body. Conversely, a high humidity retards evaporation and cooling and requires a lower air temperature for comfort. Air motion is also an important factor in body heat regulation. Greater air motion causes more rapid cooling and requires higher air temperature for comfort. Still air requires lower temperature for comfort.

Few Realize What Are Good Air Conditions.

In the artificially heated homes and work places the interests of good health call for more moisture and less heat than is customarily provided in this country. The humidity, instead of being 25 or 30 per cent, practically that of desert air, should be 45 to 50 per cent. The room temperature instead of being 75 or 80 degrees should be 65 to 68 degrees. With both these factors changed simultaneously, more healthful air conditions will result without discomfort. If one factor alone is changed, however, the air becomes uncomfortable, i. e., it feels either too hot or too cold.

Heat and dryness in the air create physical disturbance in many individuals. This is readily understood when we consider that during the winter season, we step suddenly from a low outdoor temperature and humidity of 70 per cent to a high indoor temperature with a humidity of 20 per cent. Such sudden and violent change is productive of irritation to the delicate linings of the air passages, namely,

the nose, throat and windpipe. The membranes covering the air passages are mostly affected when the air is too dry, since these tissues, which must be kept moist with their own secretions, lose moisture excessively to satisfy the lack of saturation in the air as it is being breathed in.

Thus the overheating of our houses with consequent excessive dryness of air is given as an important cause of so-called "catarrh." It is the dry quality of the air rather than the overheating which is responsible for the discomforts and resulting disease of the respiratory organs. There is also another source of danger which may be attributed to excessively dry air. When the moisture or humidity in the air becomes less than 30 per cent, the dust content of the air increases and with this increase in dust there is also an increase in the germ content, since dust is a carrier of bacteria. Dust produces further irritation of the mucous membranes and makes them a favorable soil for growth of the disease-producing germs implanted thereon. It may thus readily be seen how the dry atmosphere, such as is usually present in homes during the severe cold weather, may be the cause of a marked increase in respiratory affections.

Some Effects of Dry Air on the Human Body.

Dry air, besides causing irritation of the mucous membranes of the respiratory tract, has other effects, causing symptoms such as sleeplessness, irritability and a rapid pulse. It causes dryness of the skin and a tendency to chap. The nerves of the skin may become irritated, leading to unpleasant sensations and more or less disturbance of the rest of the nervous system. In hospital treatment of skin affections, one of the essentials to success is a moist atmosphere; especially is this true in the treatment of eczemas.

Dry air may also cause itching and burning of the eyes because of excessive evaporation of the secretions of the lining membranes. Sufferers from chronic bronchitis are

made very much worse when compelled to live in an atmosphere where the moisture is very low.

On the other hand, it is well known that excessive humidity, combined with high air temperature, has an exceedingly harmful effect on the human body. That is, of course, an indirect temperature effect, since the presence of atmospheric moisture interferes with evaporation by which the body dissipates excess heat. At very low temperatures high humidity is also harmful, since under such conditions the body loses heat mainly by conduction, and the moisture deposited in the clothing from damp air increases conduction and chilling. Excessive moisture, therefore, makes hot air feel hotter and cold air feel colder. Air which is too wet or too dry for its accompanying temperature is unhealthful and uncomfortable.

Extremes of humidity in the air of class rooms in schools have a harmful effect on the children and tend to reduce attendance. Dry, hot air parches the skin, eyes, ears and other sense organs. It causes irritation of the respiratory passages with consequent coughing. The children appear dull and listless and tire very easily; also they suffer from headaches and are unable to concentrate. They do not seem to remember well.

How to Maintain Proper Air Conditions.

In view of the far-reaching influence of atmospheric conditions upon human life, the essential requirements of good air for indoor comfort and maintenance of health are given as follows:

The air should be cool, but not too cold. For the ordinary sedentary life in the school room or the office or the home, a temperature between 65 and 68 degrees is best, if proper humidity is maintained. This temperature is bracing and in such an atmosphere the exhaled air, being hot and moist, will rise out of the breathing zone and be replaced by purer air. In a factory where physical work is performed, or in an open air school where extra

clothing is worn, the temperature may be lower.

Increasing the humidity to 50 per cent or more in artificially heated rooms is an essential to good health and high working efficiency. No possible objection can be raised to it, except that the windows will frost when the temperature gets down to 20 degrees or below. But frost does no harm. It is negligible as compared with the effects of over-dry air. The air should be in gentle but not excessive motion and its temperature should fluctuate slightly. A moderate amount of air movement and temperature variation keeps the surface of the body cool without chill and it has an excellent and pleasantly stimulating effect upon the skin, which is lacking in still air or air of steady warmth. Moderately cool, moving, normally vaporized air, with well adapted clothing, stimulates the circulation of the blood and makes the body vigorous and efficient.

The ideal solution of the problem of the proper air temperature and humidity lies with warm air furnace engineer who will plan to install humidifying apparatus of keeping walls sufficiently warm to prevent condensation of moisture in very cold weather upon the outer walls. The answer to the problem probably lies in greater air space between the inner and outer portion of the walls or better insulation.

Many buildings, classified as residences and apartments, are not properly built or equipped to maintain ideal conditions of humidity and temperature.

From an economic standpoint also, the maintenance of the proper degree of moisture in the air is worthy of consideration. During house cleaning time in the spring, the effect of dry, indoor, winter air may be seen on the walls and woodwork as well as on the furniture. This is especially noticeable above the radiators and register openings of the furnace. Furniture that is glued together falls apart under the continued action of dry air. This would be prevented if the air were properly humidified.

Huffaker Finds Proper Location of 1-Register Plant of Supreme Importance to Installers.

Protection Given to House on North and West Practically Decides Where Furnace Should Be Located.

IN our January 5th issue, page 17, C. L. Thompson, 459 East State Street, Sycamore, Illinois, submitted a composite discussion of "Subscriber's" heating problem, with which our readers are thoroughly familiar by this time. Mr. Thompson in his explanation, agreed with Mr. Turton, whose dawg then returned contentedly to his favorite fireside mat; however, as he laid his head across his forepaws, it was plain to even the ordinary observer that his eyes were only half closed, while the muscles of his haunches were slightly taut, ready for instant action on the least provocation of belligerency.

There are others, however, who do not entirely agree with Mr. Thompson, as the letter from H. B. Huffaker, Council Bluffs, Iowa, given hereinafter will attest, whether or not this will produce any of the well known growling and sparking from the Niles, Michigan, section remains to be seen.

TO AMERICAN ARTISAN:

I note that the floor plans, shown in your October 20th issue for which it was requested that a remedy be suggested for an improper pipeless installation, again appear in your January 5th issue, together with suggested changes and explanations by C. T. Thompson, Sycamore, Illinois.

I quite agree with Mr. Thompson, that there is not nearly enough detailed information given on this plan for an intelligent working basis, though it does give one important detail, the points of compass. However, I'll "take a shot" at giving you what I consider to be an improvement on both the original and on Mr. Thompson's suggestions, together with reasons for suggested changes, and I may further add that these suggestions are based on an experience of four years in planning nothing but pipeless installations,

reaching a volume of 200 installations each in the years of 1919 and 1920, the last two years I was in the retail business.

To begin with, the item I consider of supreme importance to a successful heating installation for this plan, I should locate the furnace in the northeast corner of the dining room, not nearer than 12 inches from either wall. My reason for this is because this will be nearer the north end of the building, and *behind* the door to the kitchen and the opening to library, thus enabling the furnace to take advantage of the draughts from these openings, which are largely controlled by the north winds, instead of opposing these currents as is done by the location shown.

The most difficult problem appearing on the original would seem to be to get sufficient heat to the living room, and I should suggest placing a grill the full width of the openings and at least 12 inches deep over the two openings marked. The plan does not show a door to the stairway, and if there is none, in addition to these grills, there should be an apron dropped from the ceiling over the stairway, the full width of the stairway and to a point at least as low as would be level with the *bottom* of the grill openings. This would prevent the upstairs from robbing the living room of desired heat, at least until that room reached the desired comfort. This apron might be hinged so that its elevation would give the upper floor this advantage under certain conditions.

If anything further was necessary to make this installation satisfactory, I should suggest that a cold air face be cut in the floor at the foot of the stairway and returned to the bottom of the cold air casing with a 10 inch pipe. This will eliminate much of the floor draft which is

quite often objected to in pipeless work, but which I have found is largely the result of an improper location of the furnace.

There are many things that must be considered in deciding on a proper location for a register plant. The points of compass; the *outside* openings, as well as those between the rooms; the *outside* conditions (whether or not the house is protected from the north and west or if it stands alone); and the purpose for which the rooms are to be used; also the height of ceilings and inside openings.

For this reason it is obvious that the location of the plant might be entirely different in different houses, even though they be of the same size and general floor plan.

The arrangement suggested in the foregoing for the plan shown differs from Mr. Thompson's suggestion in the location of the plant and the addition of the "apron" over the stairway, but I believe he will find that it will eliminate the need for the "booster" pipe he suggests, the use of which always provides our "pipe" boosters with material for sarcastic comment.

H. B. HUFFAKER.

Council Bluffs, Iowa.

Nugent Metal Works Capitalizes on Its Satisfied Rudy Heater Users.

Without question or doubt the satisfied customer is the best advertisement a product can have. Human beings are not so different in their general make-up that what pleases one will not please a second and a third as well and perhaps better. The satisfied customer of a furnace gladly recommends his make of furnace to his friends, even often going so far as to quote figures on the cost of operation. He is seldom adverse to letting the installer use his name on circulars or handbills as a satisfied customer.

We have reproduced a handbill of the Nugent Metal Works which we believe is about the last word in perfection of the business soliciting handbill or mailing circular.

The mail boxes of the Chicago apartment buildings are continually stuffed with all manner of circulars, cards and other advertising media which are yanked out in disgust and thrown away unread by those for whom they were intended.

A bill of the sort shown is hardly apt to find its way to the waste paper

these people mentioned and obtain first-hand information, or actually see the object of their desires in operation without even as much as going near the installer or calling him by phone.

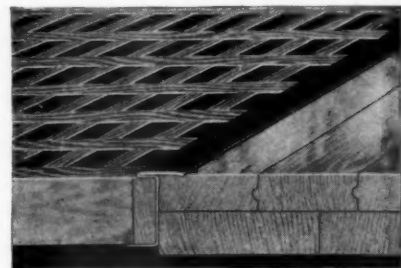
This type of confidence in the furnace handled and in the installation made is what the furnace in-

When we teach people to look before they leap, they will end by installing the warm air furnace in preference to any other form of heating plant.

Manrow Sheet Metal Works Produces New Wood Register Support.

To render some specific service is the primary object of all manufactured articles. Many manufactured articles, however, are required to have three other attributes—they must be labor saving, sanitary and ornamental—in order to be able to hold their place in the highly competitive markets of today.

The wood register requires to be



Showing Support in Place.

supported in some way over the register pipes.

The Manrow Sheet Metal Works, 506-8-10 East Washington Street, Goshen, Indiana, have produced something new in the way of a wooden register encased in a metal sheath. The metal sheath, as shown in the illustration, forms a bearing all around for the register to rest upon. This permits ready installation, as well as removal at any time, says the company.

Gilt Edge Men Hold Their Annual Sales Convention.

Following its established custom, R. J. Schwab & Sons Company, Milwaukee, Wisconsin, called its salesmen and executives together for the Annual Sales Convention on January 3rd to 5th.

Under the direction of General Manager Henry E. Schwab and Sales Manager E. L. Olson, the subjects of selling to dealers, merchandising, retail selling, installations



ABILITY!



You May Ask Us - - "What Has Ability To Do With A Furnace Installation?"

Ability in a marked degree is an asset and is just as necessary to a Furnace installation as it is to man.

The Furnace installation that does not possess the ability to heat your home evenly and economically and stand up in service year after year is not efficient, and is a failure in every respect.

We can unhesitatingly recommend the

HY-POWER
RUDY HEATERS

with the assurance, that they invariably make good. They are substantially made, priced right, sold right and when sold, stay sold and sell others. What more can you expect a Furnace to do?

Satisfied Rudy Users:

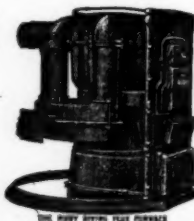
Two Furnaces Wapello Schools.
Lava Side School.
Grandview School.
Boon School.
Springfield School.
M. E. Anderson, contractor, Blackfoot, Idaho.
James Yancy, contractor, Blackfoot, Idaho.
Jed Taylor, Riverside.
Ernest Anderson, Moreland.
George Yost, R. F. D. No. 1.
Jacob Nell, R. F. D. No. 1.
Jake Quinn, Blackfoot, Idaho.
Phyll Quillen, Blackfoot, Idaho.
Forest Trigo, R. F. D. No. 1.
James Christensen, Blackfoot, Idaho.

James D. Johnston, Blackfoot, Idaho.
W. J. Busby, Blackfoot, Idaho.
Frank T. Horn, Blackfoot, Idaho.
C. F. Molden, Blackfoot, Idaho.
Wesley LaCuer, Blackfoot, Idaho.
Calvin Moser, Aberdeen, Idaho.
Andy Berkley, Blackfoot, Idaho.
W. D. Gagen, Blackfoot, Idaho.
Al Miller, Blackfoot, Idaho.
Blackfoot Mercantile Company, Blackfoot, Idaho.
Arrow Theatre, Arco, Idaho.
Fort Hall Irrigation Co., Fort Hall, Idaho.
Fort Hall Engineering Department, Fort Hall, Idaho.
Ernest D. Bloom, Blackfoot, Idaho.

And Still They Say Rudy

1923 Installations

Gosh School, Gosh, Idaho.
Tupacero School, Tupacero, Idaho.
Chatterfield School, Chatterfield, Idaho.
Oibson School, Oibson, Idaho.
Mike Barclay, Blackfoot, Idaho.
L. B. Dove, Blackfoot, Idaho.
Eusack Hansen, Hatley, Idaho.
Lee Faulstich, Blackfoot, Idaho.
R. C. McGonagle, Blackfoot, Idaho.
L. E. Russell, Lima, Montana.



NUGENT METAL WORKS

PHONE 734 BLACKFOOT

ALL KINDS OF SHEET METAL WORK

An Excellent Form of Advertisement Used to Push Warm Air Furnaces.

basket unread. Its appeal from the start is too great for that, and mailed or distributed at the proper season of the year, it will be productive of good business.

The arguments presented there are logical and direct to the point. The names of satisfied customers are there in black and white, so that anyone interested can call any of

dustry at large needs. This type of confidence in work well done is rewarded in increased patronage, and greater still in the satisfaction of work well done.

Let us have more of this type of advertising and we will soon put warm air furnaces and their installation on a higher plane than they have ever been before.

and advertising were discussed in a thorough and intensive way.

High spots of the convention included an analysis of the construction and heating efficiency of the "New and Even Better" Gilt Edge Series by William Gunton, head of the Gilt Edge Engineering Staff, a typical "agency sale," with W. C. Konneman cast as Gilt Edge Salesman and Messrs. Ryberg and Roeller as "show me" dealers, and an outline of advertising plans and policies by C. E. Walters of the Gilt Edge Advertising Department.

In spite of sub-zero weather, Friday's distinctively social features of the convention, dinner at the Medford Hotel and a theater party at the Garrick, were pronounced huge successes. The presence of Mr. R. J. Schwab, founder of the Company, at the dinner was an inspiration to the men.

Those in attendance included Messrs. W. C. Koenneman, P. E. Ryberg, J. G. Roeller, H. O. Schroeder, H. R. Griswold, E. H. Gosse, A. G. Pomrening and Travers Daniel from the Gilt Edge firing line; Messrs. Evans and Iler of the Madison Gilt Edge Company, and Mr. Shaw of the Gilt Edge Heating Company, Oak Park, Illinois.

Can a Greenhouse Be Successfully Heated With Warm Air?

The heating of greenhouses with warm air may not be an innovation at this enlightened day, but wherever the practice is in vogue it is admittedly still in the trial or experimental stages, although it is by no means an impractical method of heating a greenhouse.

The accompanying diagram shows a plan of a greenhouse to be heated with warm air, and it was submitted by L. C. Noland, Manager of the Crary Tin Shop, —, Iowa.

The dimensions as given by Mr. Noland are as follows:
To AMERICAN ARTISAN:

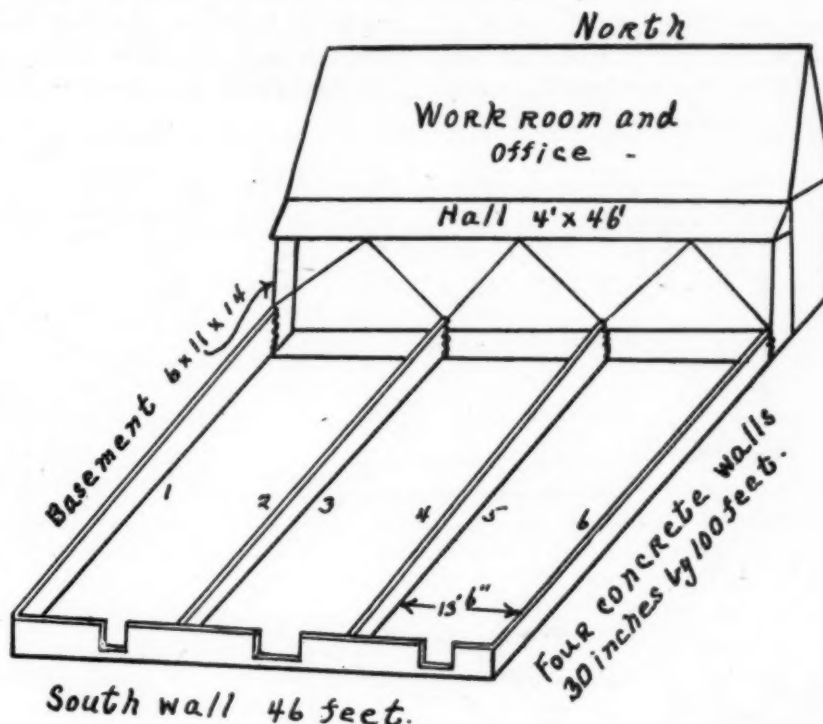
We have mailed a sketch of greenhouse for which the owner is figuring on a warm air heating plant, if such would be possible with

gravity or fan system, by running warm air mains under benches and distributing air evenly by damper controls.

It looks practical to a certain extent, but perhaps there are some of our friends who have had experience along this line who would be glad to help us out, and we all know that practical experience counts. In all my years of warm air heating this is my first experience along this line

The Man Who Tries to Play a Lone Hand.

The following cryptic article was taken from the January number of *Associated Advertising*. It is so expressive and full of "meat" that we could not resist the temptation to use the shears. We have made one change: For the words "Advertising Club" we have substituted the "Trade Association."



and I am of the opinion it can be done.

The benches marked 1, 2, 3, 4, 5, 6 on the diagram are 5 feet 6 inches wide and 18 inches high. They are 100 feet long and between them there are aisles 2 feet 6 inches wide.

The concrete walls have an 18-inch slope from the work room at the north to the extreme south end.

The basement floor is only 28 inches lower than the floor in the north end of the greenhouse.

At the south end of the greenhouses there are doors 2 feet 6 inches by 7 feet, while the height to the ridge is 8 feet 8 inches.

The greenhouses set 18 inches in the ground, except their south end, which stands exposed.

There are 6,000 square feet of glass over all, with no glass in the sides.

"Once in a while we meet a man who is trying to play a lone hand. He has no social activities, he has no close friends, he does not exchange or accept advice or counsel in his business. When profits come his way, he shares them with no one; if losses occur, he struggles alone under the burden.

"Man is by nature a gregarious animal. He thrives upon association with others of his kind. Sharing a loss diminishes it; while sharing a joy multiplies and increases it.

"That is the reason for such an organization as a Trade Association. It gives opportunity for team work, for exchange of ideas, for association, for unity of purpose. It relieves one of the necessity and the tragedy of trying to play a lone hand."

Making Sheet Metal Jackets for Locomotive Boilers Where External Connections Are Encountered.

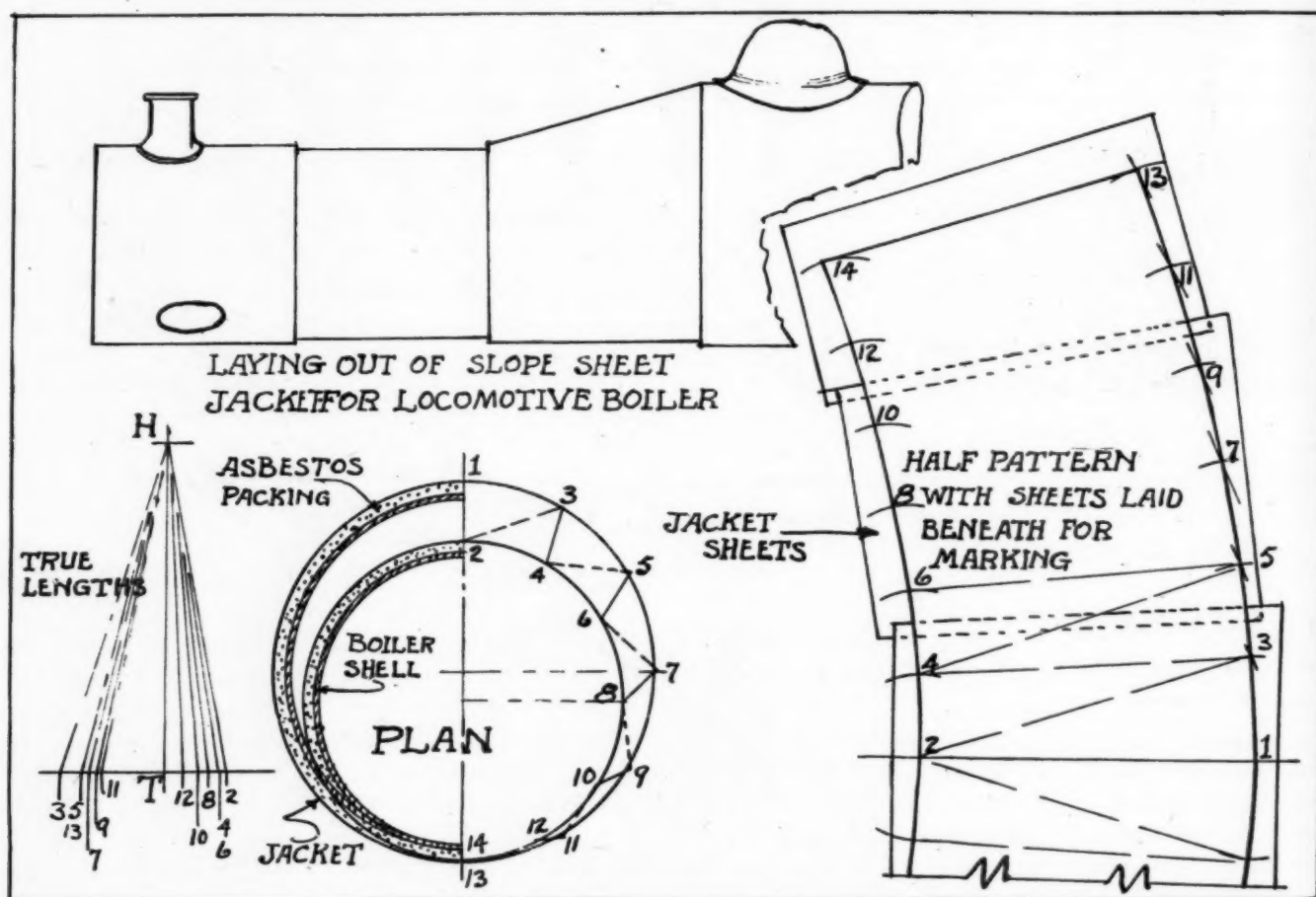
*Jackets Generally Cut to One Pattern Which
Is Developed from Original Plans of Boiler.*

Written Especially for AMERICAN ARTISAN by O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri.

A SHEET metal correspondent who, no doubt, works in a railroad shop, wishes to know how to lay out the sheet metal jackets which cover the several types of locomotives. Since receiving this letter, the writer has looked at many

boiler shell is generally covered with about three-quarter-inch asbestos packing and over this the sheet metal man covers the boiler with his jacket made of American planished iron, which is much the same as the old Russian iron. We know in late

about the boiler barrel. There is so much cutting and fitting to be done for pipes and steam port holes and brackets and other connections that it is the most difficult thing to lay them out. They are, therefore, generally cut to one pattern as becomes



Working Drawing of Pattern for Sheet Metal Locomotive Boiler Jacket.

locomotives with the view to gathering ideas on their procedure. It seems that most of the locomotives are made in two designs, the one with a straight barrel or boiler, and the other which contains the slope sheet shown in this drawing. Now, all straight barreled boilers would really not require any pattern drafting, only laying off the sheets, as becomes the circumference. The

years it was impossible to import anything from Russia, and therefore, the material used for lagging the boilers must be the American planished steel, which from external appearance looks much like the old Russian iron.

Of course, there is the width of sheets to be cut, to make assembling convenient, between one section and another, as becomes complications

that particular type of boiler, which is best developed from the original plans from which the boilers were made, or showing the piping connections in place so the holes for the jacket can be located.

But for boilers that have a slope sheet a special development must be made similar as our plan view shows. Now these slope sheets are made in several different designs;

some are made by means of semi-circles as we show, others have the sides straight while the top of the steam drum is higher, and still others have a sort of oval design between the smaller and the larger shells. Just whatever the design would be it would be put down as our plan shows. Only the right hand half is necessary, since that takes in the line along which the metal must fit. Divide each semi-circle in the same number of equal parts and join them with lines as 2-3, 3-4, 4-5, 13-14. Then to find the true lengths, we draw any line as H-T, which will be the length of the slope sheet, or the distance between seams. Then with dividers we pick these lines from plan, setting the dotted lines to the left of point T and the solid lines to the right, as T-4-6-8-10-12; also T-3-5-7-9-11-13. When lines are drawn to H we have the true lengths.

Now to set off the pattern we draw any line as 1-2 equal to H-2 of diagram, then we pick the girth spaces from plan as 1-3 and 2-4 and using 1 in pattern as center, we strike arcs as at 3; next we use the space 2-4 as radius, and point 2 in pattern as center, we strike arcs as at 4. Now pick true length H-3 and using point 2 as center, cross arcs in point 3. Use the new point 3 as center, and with true length H-4 cross arcs in point 4. Then from these new points 3 and 4 describe the girth arcs 5 and 6 equal to 3-5 and 4-6 of plan. Cross these arcs with true lengths with H-5 and H-6. Repeat in this way until points 13-14 are established and then draw lines to all points where arcs cross and the pattern is finished.

Now, since the entire slope sheet is not made out of one piece of metal, we therefore place the seams lengthwise and by putting several sheets under our pattern as shown, taking care to work in the radial aspect, so that the small end of the sheets will be narrower than the back end. This can be done by averaging a similar distance from any point as 3-5 and 4-6, or else extending the lines from both edges 13-14 to an apex and then draw

radial lines as would become the seams. When these plates are laid underneath the edges are marked by means of prick marks and then certain allowances are made for riveting and assembling. The rest of the job is largely a mechanical one and must be governed by the practice in the shop for attaching the sheets to the boiler, also in riveting them in place. Many of the locomotive shops have different mechanical procedures the same as contract shops

and, therefore, some of these things must be followed as they do in the shop.

Sometimes only one piece at a time can be fitted in position and marked for the holes; but ordinarily the boilers are covered before many of the outside connections are fitted. In this way only holes need be cut and it saves slipping the sheets as would otherwise be necessary after the mountings are fitted into their respective positions.

Harmony Club of J. M. & L. A. Osborn Holds Meetings in Cleveland January 9 to 11.

Matters Pertaining to Welfare of Osborn Company Fully Discussed by Members.

THE Annual Meeting of the Harmony Club of the J. M. & L. A. Osborn Company, Cleveland, Ohio, was held in that city January 9th, 10th and 11th. A. W. Howe, Chairman, presided, other officers being J. W. Harrison, Vice-Chairman; W. B. Osborn, Secretary, and H. C. Thomas, Treasurer. The Harmony Club is composed of the executives, department heads and their assistants, and functions as an organization separate from the Osborn Company. All matters pertaining to the welfare of the Osborn organization are freely discussed, recommendations made and business discussed in a regular club manner. The result is a spirit of coördination and coöperation that can't fail to bespeak the welfare and success of such an organization.

The opening session, Wednesday evening, the 9th, brought forth a talk on "Advertising as a Means of Assisting the Salesman" and another on "The Purchasing Department, its Difficulties," presented respectively by the advertising counsel and the purchasing agent of the company. Both of these were followed by interesting discussions. Thursday afternoon five automobiles conveyed the Harmony Club to Canton, Ohio, where they were guests of a similar organization of the Superior Sheet Steel Company. They were taken in tow there and

conducted through that company's mill. There they saw the manufacture of black and galvanized sheets from the shearing of the bars to the loading of the finished product into freight cars. They saw the heating and rolling of bars into sheets, the annealing process, the galvanizing process and finally the inspecting, stamping, bundling and weighing of the finished product. After the mill tour the two clubs adjourned to Bender's Cafe, where in addition to the satisfaction of the inner man a mental treat was indulged in.

H. A. Roemer, General Manager of the Superior Company, gave a history of the Sheet Metal Industry and was followed by Fred Lawrence, General Superintendent, who presented a verbal picture of the making of sheets from start to finish. They were followed by other department heads who told of their various departments, and, after an evening replete with wonderful good-fellowship, the Harmony Club returned to Cleveland.

The Friday session, starting at 3:30 p. m., continued through until 10:30, interrupted, however, by the Annual Banquet, held at the Cleveland Athletic Club, where the closing session was held.

Among the subjects discussed were "Terne Plate," "Copper and Solder," "Manufacturing Department Products," and "Special

Sheets." These were followed by unfinished business and the Annual Meeting adjourned. The following officers were elected: J. F. Reichert, Chairman; J. A. Decker, Vice-Chairman; Elmer Thorp, Secretary; M. J. Doering, Treasurer. A mid-summer session may be called in July, but, barring this, the next Annual Meeting will be held early in January, 1925.

Program of Indiana Sheet Metal Contractors' and Fur-Mets Convention.

The Fifth Annual Convention of the Sheet Metal Contractors' Association of Indiana will be held in the Hotel Severin, Indianapolis, Indiana, January 29 and 30, 1924.

The following program will be carried out during the convention.

Tuesday, January 29.

Registration and distribution of badges to members of the Association, Fur-Met members and visitors will take place at 4 p. m.

At 5 p. m. the board of directors will meet.

The convention will be called to order at 7:30 p. m., by President A. W. Dudley.

This will be followed by a reading of the minutes of the last convention, the reports of the officers and the appointment of committees.

The visiting ladies attending the convention will be entertained by the Ladies' Entertainment Committee of the local association and the Fur-Mets.

Wednesday, January 30.

The opening session Wednesday will begin with an address by Edwin L. Seabrook, Secretary National Association Sheet Metal Contractors, on "Equipment for Business."

Following this address there will be a discussion of business ideas.

The opening hour of the afternoon session will be devoted to a discussion for the furnace men.

The reports from the various local associations represented will then be heard.

This will be followed by the reports of the committees and the election of officers.

The evening banquet will be held at the Athenaeum, corner of Michigan and New Jersey Streets. (Admission by ticket only.)

H. P. Sheets, Secretary of the National Retail Hardware Association, will speak on "The Benefits of an Organization."

Paul R. Jordan will speak on "Cooperation" at this time.

Fur-Met's Meeting.

The session of the Fifth Annual Convention of Indiana Fur-Mets will be held at the Hotel Severin January 30, 10:30 a. m.

Descriptive Pamphlet on Roof and Furnace Cement Issued by Clinton Metallic Paint, New York.

During the course of a building construction there are found many places where nails cannot be used to advantage. For instance, at the edges and ridge courses, around chimneys and dormer windows or wherever the joining surface is limited some substance must be used that will permanently secure the shingles, tile or slate.

The Clinton Metallic Paint Company, Clinton, New York, has issued literature explaining the Clinton Silk Fibre Roof Cement, a product manufactured by the firm for the purpose mentioned heretofore.

This cement, the booklet explains, does not harden in cold weather or run in hot weather and will cling to the smooth surface of slate or tile. It keeps slate, tile or asbestos shingles in position.

The company also manufactures a "Super-Heat" Fire Brick Cement used in repairing furnaces, which is also described at length in a supplementary pamphlet. Write for further details.

Schmidt, Wisconsin, Constructs Support to Hold Ladder Away from Roof Edge.

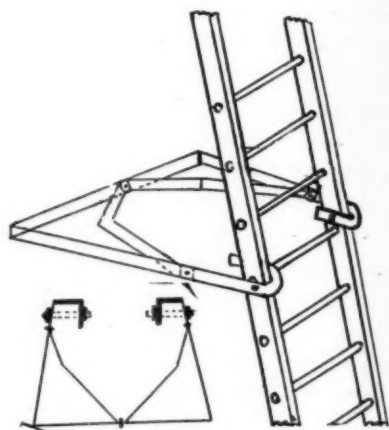
In order to facilitate the work of putting on gutters or spouts, J. P. Schmidt, —, Wisconsin, has constructed a ladder attachment that holds the upper end of the ladder out away from the roof's edge.

Mr. Schmidt's letter is as follows: To AMERICAN ARTISAN:

I am mailing you a rough sketch of a ladder support used to hold the ladder clear of the cornice edge.

I made this support many years ago and we use it every time we erect hanging gutters.

This support can be made easily by any sheet metal man.



Ladder Support.

The frame is made from 2-inch band iron and 1/4-inch bolts are used.

Yours very truly,

J. P. SCHMIDT.

—, Wisconsin, January 4, 1924.

EDITOR'S NOTE.—In order to strengthen this support, and to avert the possibility of its turning either up or down when under the strain of the man's weight, two semi-vertical braces could be added; that is, a brace running about midway from each side of the support to the sides of the ladder.

Entertainment Program for Michigan Sheet Metal Convention, February 25 to 28 Ready.

Secretary F. E. Ederle announces that on Tuesday noon, January 8th, the Lansing, Michigan, Sheet Metal Contractors' Association members held a meeting at the Hotel Kerns to discuss arrangements for the coming state convention, to be held at Lansing, February 25 to 28. It was decided to take the delegates to the Michigan Agricultural College on Tuesday evening, February 26, for a dinner party. Following the dinner a special entertainment will be furnished by the students, which

will include wrestling, boxing and ladies' diving and swimming. On Thursday afternoon, February 28, a trip will be made through the Reo Motor Car plant.

Charles Pearson, Chairman of the Travelers' Auxiliary Entertainment, announces that he has secured Douglas Malloch, Chicago, as the principal speaker at the Travelers'

banquet. His subject will be "The Sinners I Have Met." For toastmaster Charles informs us that, after looking them all over, no person could be found who would be acceptable for this position except our good friend Hugh E. Doherty, Detroit. Hugh has consented to act, which means that the banquet will be a success.

E. H. Hoffeld, Cincinnati, Takes Over Ferdinand Dieckmann Company Interests January 1.

Graduates from School of Hard Knocks at Age of 14 and Advances to Ownership of Firm with Whom He Started as Errand Boy.

IT IS a universal practice today for parents to hold up for emulation by the "young idea" the lives of men of character and integrity. The records of these men thus elected for scrutiny invariably show—with exceptions, of course—not an A. B. or Ph. D. degree from this or that university, but rather a degree of "H. K." which stands for Higher Knowledge gained in the good old-fashioned school of "Hard Knocks."

Andrew Carnegie, the great philanthropist who did incomparable good in making available to the American public world works in science and literature, rose from a telegraph delivery boy. His autobiography shows that by dint of perseverance, alertness of mind and hard work he gained his success.

It is unnecessary for us, however, to go beyond our own industry to find examples of this sort of success. It was by dint of diligence, stick-to-itiveness and first-hand experience gained through the school of hard knocks that E. H. Hoffeld, who on January 1, 1924, personally took over the entire Ferdinand Dieckmann interests, won his way in the world.

Mr. Hoffeld was born in Cincinnati, Ohio, July 30, 1879. He started to work at the age of 14 years. With little or no "book learnin'" he started upon the career which has won for him a vast host of friends and which bids fair to leave him in very comfortable financial circumstances.

He found his first opportunity with Ferdinand Dieckmann, who was then proprietor of a small shop which made galvanized iron sheets and metal work, doing a comparatively brisk business.

As errand boy and shipping clerk he had come in contact with many of the firm's customers, and being



E. H. Hoffeld

of a genial disposition, had made many friends among them. This led, in 1903, to his becoming a salesman and this is where his opportunity came to show the material that was in him. His record as a salesman was so conspicuously a success that it eventually led to his being made manager of the entire business in 1911.

In 1914 AMERICAN ARTISAN had the unique pleasure of relating to its readers the outstanding facts of Mr. Hoffeld's life up to the time of

his being made manager of the Dieckmann Company and his success thus far.

It is now an increased pleasure for AMERICAN ARTISAN to announce that Mr. Hoffeld has taken over the entire proprietorship of the firm into whose employ he entered in the lowly position of errand boy some thirty odd years ago.

Success Is Not Canned, But It Comes in Cans.

1. I can be confident.
I can sell goods just as soon as my customer feels my own confidence in them.
2. I can be studious.
I can study my goods and my customers.
3. I can be honest.
I can be honest with myself, my firm and my customers.
4. I can be sincere.
I can say just what I mean and do exactly what I say I will do.
5. I can be tactful.
I can overcome objections with tact and persuasion.
6. I can be polite.
I can remember that politeness wins respect.
7. I can be busy.
I can busy myself with some productive or profitable work.
8. I can be loyal.
I can work just as hard when my employer is away as when he is present.
9. I can be enthusiastic.
I can be enthusiastic about my goods without being boastful.
10. I can be helpful.
I can make every customer feel that whether they buy or not, I am glad to serve and assist them in every way.

Notes and Queries

Spring Steel Wire.

From De Weese Radiator and Repair Shop, 814 Barr Street, Fort Wayne, Indiana.

Please inform me where I can buy spring steel wire.

Ans.—American Steel and Wire Company, 208 South La Salle Street, Chicago, Illinois.

Gifts of Utility Display Wins First Prize in AMERICAN ARTISAN Window Display Competition.

Everett A. Lawrence, 326 Main Street, Springfield Massachusetts, "Cops Bacon" in Closely Contested Annual Competition.

THE accompanying display of Christmas gifts, arranged by Everett A. Lawrence, 326 Main Street, Springfield, Massachusetts, won the first prize—\$50 in cash—in AMERICAN ARTISAN AND HARDWARE RECORD Annual Window Display Competition which closed January 12, 1924.

As will be seen by the illustration,

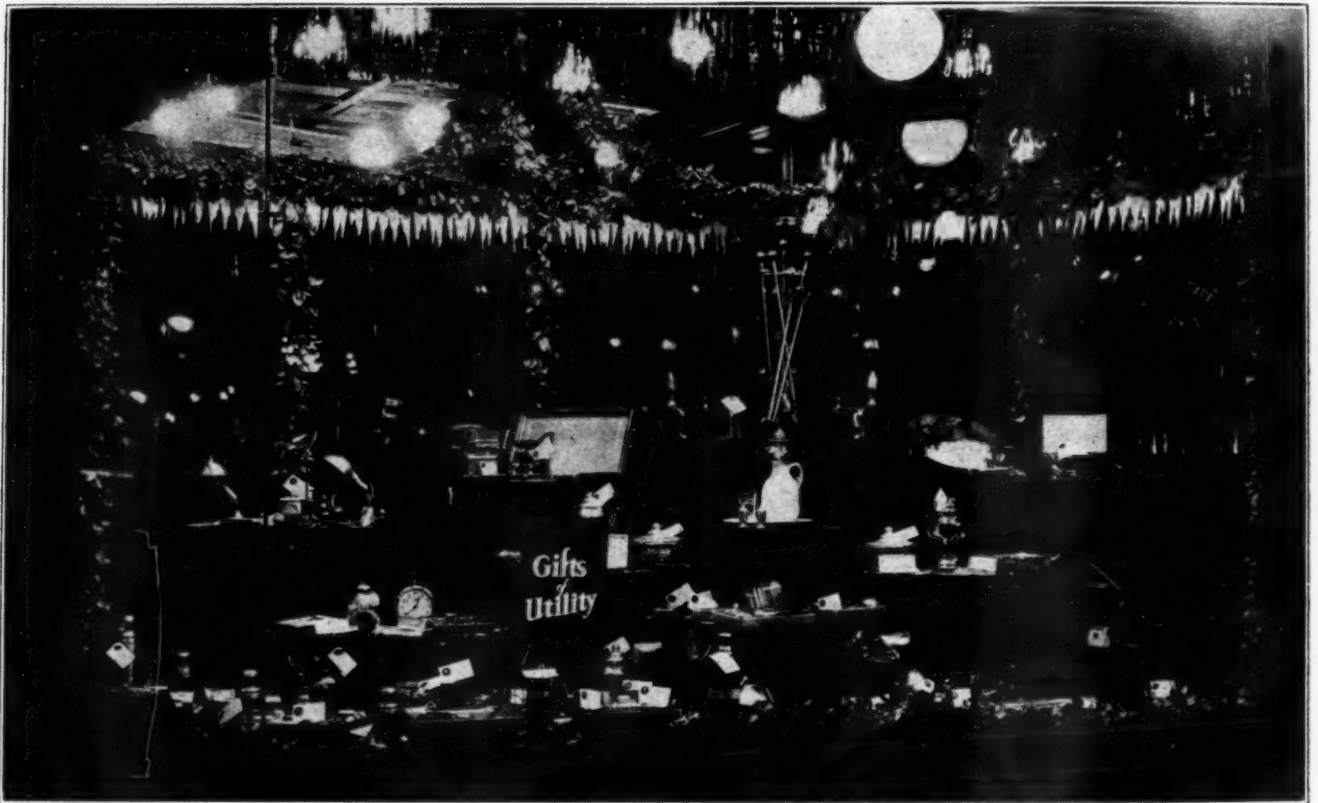
The selection of Christmas gifts represented in the window, the judges agreed, were without question the best that could have been made in the space allotted.

The window is not crowded in the least, and is especially designed to throw the light on the articles displayed so as to set them off to the best advantage.

the setting, so to speak.

The entire window is excellently arranged, and although the fight for second, third and fourth honors was hotly contested, the judges came to an immediate decision regarding the award of first honors and the \$50 cash prize to Mr. Lawrence.

Mr. Lawrence, AMERICAN ARTISAN AND HARDWARE RECORD ex-



Window Display Which Won the 50 Dollar Cash Prize in American Artisan Annual Window Display Competition. It Was Designed by Everett A. Lawrence, 326 Main Street, Springfield, Massachusetts.

the articles displayed were electrical goods, casseroles, pyrex ware, fire-place fixtures, cutlery, vacuum goods and bird cages.

The background was arranged with colored crepe paper and leaves.

The point upon which the judges were unanimously agreed was the fact that the window, although artistically arranged, was selling such a large group of articles.

The arrangement of the fireplace and andirons, really a prosaic and difficult subject to display artistically in itself, is excellently carried out.

It seems to have been an invariable rule, in arranging this window, for the designer to place those articles to the fore which in themselves do not ordinarily attract attention readily, while those more attractive articles brought up in the rear of

tends to you its highest compliments on your ability as a window trimmer.

There are perhaps slow sellers you must carry in stock, but see that the stock is kept at a minimum and make it sell as fast as possible.

What is the percentage of your sales, spent for advertising?

Hotly Contested Window Display Competition Closes January 12, 1924.

Judges Find Great Difficulty in Deciding on Winners—Prize Winners Located in Four Different Sections of Country.

SOME peculiar but very interesting facts regarding the attitude of retail merchants toward the window display were brought out by AMERICAN ARTISAN AND HARDWARE RECORD Annual Window Display Competition which closed January 12, 1924.

The ever increasing number of photographs which are yearly submitted for entry is highly encouraging. It shows that retailers generally are interested in and are making a good, honest effort to attain perfection in that most valuable but silent adjunct to retail salesmanship—the art of scientific window display designing.

The wide range of articles represented in the photographs submitted is also highly commendable. That feature in itself indicates that the retail hardware merchant the country over—and every section of the country was represented in the competition—is wide-awake and up-and-at-em for the business which for a time seemed destined to go under the monopoly of the proverbial corner drug store.

And what other store, if not the hardware store, can lay a more rightful claim to the sporting goods—all seasons included—the electrical goods, kitchen utensils, automobile parts, shaving goods, and last but not the least, the radio goods business?

This window display brings out very forcibly the fact that the hardware store of today is far different from that of a few years ago. And why should it not be?

In selecting the men to judge the entries, the management of AMERICAN ARTISAN AND HARDWARE RECORD exercised the greatest of care to call on only those men who by long experience in the hardware business were competent to pick out the fine points of each photograph submitted and who have

established reputations for fair dealing.

H. G. Gansz, City Sales Manager for Hibbard, Spencer & Bartlett Company, State Street Bridge, Chicago, has had many years of practical experience in the business of selling hardware and is entirely familiar with every phase of the window display art.

W. F. Waller, Vice-President, Cicero Chicago Corrugating Company, Cicero, Illinois, has likewise had many years of practical experience in this field and AMERICAN ARTISAN AND HARDWARE RECORD feels itself especially fortunate in having secured his services for this important work.

Eugene J. Schuberth, Manager, Schuberth Hardware Company, 5820 Wentworth Avenue, Chicago, has a thorough knowledge of the problems of the retail hardware selling field, and the management of AMERICAN ARTISAN AND HARDWARE RECORD feels that the decisions rendered by these highly competent judges is fair in every respect.

The names of the entrants, as they themselves know, were withheld from the judges until they had thoroughly agreed upon the merits of the photographs submitted. Each photograph entered passed through the hands of each judge, who initialed it or not according to his opinion of its merits deserved. When each judge had passed individually upon all of the photographs, a collective decision was made and the winners chosen.

Having done this, they agreed collectively on the four winners and those receiving honorable mention.

When all of the decisions were made, the envelopes containing the names of the contestants were opened.

The list of the prize winners and honorable mentions are as follows:

Prize Winners.

First Prize, \$50—Photograph marked "Gifts of Utility," Everett A. Lawrence, 326 Main Street, Springfield, Massachusetts.

Second Prize, \$25—Photograph marked "Roger," E. Rahn, in care of the Bond Hardware Company, Ltd., Guelph, Ontario, Canada.

Third Prize, \$15—Photograph marked "Checkers," H. F. Westcott and John P. Niemi, Decorators for I. E. Swift Company, Houston, Michigan.

Fourth Prize, \$10—Photograph marked "Van Dolah," P. E. Fisher, Manager Retail Department, The Lilly Hardware Company, 114-118 East Washington Street, Indianapolis, Indiana.

Honorable Mention.

Melvin G. Cottier, Murphy Maclay Hardware Company, Great Falls, Montana.

Howard C. Crabb, Belcher & Loomis Hardware Company, Providence, Rhode Island.

Gustave F. Derse, J. J. Snyder & Son, Inc., 2254 Bedford Avenue, Brooklyn, New York.

A. T. Dingeldein, 519 West Main Street, Springfield, Ohio.

John Hammer, Duncan & Goodell Company, 404 Main Street, Worcester, Massachusetts.

Dan P. Hill, Advertising Manager, Ogden Hardware Company, Ashland, Kentucky.

H. HoogenHyde, The L. Hoekstra Company, 713-15 Portage Street, Kalamazoo, Michigan.

S. R. Milbrandt, Aberdeen Furnace Company, Aberdeen, South Dakota.

W. H. Owen, Hennepin Hardware Company, 909 Hennepin Avenue, Minneapolis, Minnesota.

F. J. Prince, Western Iron Stores Company, Milwaukee, Wisconsin.

Marion Sagendore, Greenville Hardware Company, Greenville, Michigan.

Bernard F. St. Louis, Plattsburg, New York.

E. A. Shaw, Centerville, Iowa.

Harold Stevens, Window Trimmer for the Wilson Hardware Company, Boulder, Colorado.

P. A. Sublett, Jr., Advertising Manager, Pettée's, Oklahoma City, Oklahoma.

Twin City Hardware & Heating Company, 1926 University Avenue, Minnesota Transfer, Minnesota.

E. Wilson, care Pilcher Hardware Company, Ida Grove, Iowa.

"Forsake Not the Assembling of Yourselves Together."

The following announcement has been received from J. M. Stone, Secretary-Treasurer, Kentucky Hardware and Implement Association, regarding the association convention which will take place at Louisville, January 22 to 25:

If this injunction given two thousand years ago was for the spiritual benefit of the church, it certainly holds good today with reference to business associations.

To come in personal contact with your fellow dealers is an inspiration to you.

Once each year we endeavor to bring the hardware and implement

dealers together in a convention for four days which is a recreation for you and better fits you to go back home to take up the routine of duties for the new year.

Have you ever attended a convention and when you get back to your store you feel refreshed, a bigger and broader merchant, because of the association with the dealers you have met?

You owe this four days to yourself, your business, and you owe it to your wife to bring her along with you.

Every lady who comes to Louisville will be supplied with a ticket for each of the four days of the convention to any of the following theaters: Alamo, Keith's National, Mary Anderson, Majestic, Strand, Rialto, Walnut and Kentucky.

The ladies can have a good time shopping, sight-seeing and theaters while the men do the work at the convention.

J. M. STONE,
Secretary-Treasurer.

West Virginia Hardware Association Convention Voted Big Success.

Frederick Hotel and Exhibit Hall Used for Eighteenth Annual Meeting and Exhibition January 15 to 18.

EXHIBIT HALL, Huntington, West Virginia, teemed with the hum of voices Tuesday, January 15, as the members of the West Virginia Hardware Association assembled for its Eighteenth Annual Convention and Exhibition.

Promptly at 1:30 p. m., Tuesday, President Hawker, Shinnston, West Virginia, asked that visiting cease and the meeting came to order.

The visiting delegates and exhibitors were welcomed to Huntington by J. C. Hawkins, of Emmons-Hawkins Hardware Company, Huntington, West Virginia. In the evening the meeting was continued in the Assembly Room of the Hotel Frederick. The members and ladies listened to a spirited address on "Wife Saving Stations" which was enjoyed by all. The address was followed by dancing until 12 m.

The President's Annual Address was held over until the meeting Wednesday morning, as were the reports of the Secretary-Treasurer, James B. Carson.

Report of Secretary-Treasurer Carson.

The office of the secretary of every organization must be the clearing house of the organization. It must show in its report whether the organization is growing in its usefulness to its members, or whether it is degenerating. I believe the report I am about to make to you will bring a thrill of pride to every member.

Five years ago when our office was asked to take over the work for your association, we made a survey of the possibilities of the number of members in the state and we found from all the records available, that about 265 was all that we could hope for. At that time there were less than 80 paid members enrolled and when we closed our books on the 31st of December, 1923, we had 249 paid members whose names are in our directory that has already been sent to you. In addition to this list, the directory shows that there are 62 honorary members made up from the best manufacturers and jobbers in the United

States who sell their product through our members and then in addition to these you will find in the directory, the names of 120 salesmen who call on our members and who are also honorary members of our association, making a total number of 429 names in our directory who are interested in the success of our association. We want to impress you with the thought that this organization has grown to a place where it has power to correct evils and do good.

Membership an Investment.

There are no limits to the possibilities of organization work, there are avenues leading out in every direction. Your membership is an investment and while we know that every member receives cash dividends that amount to more than his membership costs, yet he should try to make his dividend larger and he can do this by greater interest in the work of his association.

Better and more friendly working arrangements between members in the same



Homer Hawker, President West Virginia Hardware Association.

cities and towns present to you wonderful opportunities for making a better business for all of you. Staple prices and staple credit terms are the result of friendly cooperation between members and there is just as much necessity for work of this kind as there is to invest in advertising to increase the number of your customers.

We should never forget the motto of our association that is carried on all our printed matter, "It's the business of the West Virginia Hardware Association to make better Hardware Merchants." Now the West Virginia Hardware Association is the membership and you can help to make better hardware merchants by telling each other of your mistakes as well as boasting of your successes. It is this spirit that builds.

The office of your secretary is being supported in a splendid manner by our National headquarters and we feel sure that through their efforts, many members who have taken up their better accounting methods are in a safer position financially than ever before.

Speaks Word for Exhibitors.

This convention offers opportunities to carry back home with you, something that will enter into the profit side of the

year's business; there is something for every member in attendance. I want to speak a word for our exhibitors, they have come to our convention because they, too, are interested in the hardware business of West Virginia, they are a link in the chain of distribution to the consumer that gives to him through your store, such items as he finds it necessary to buy just the same as you are; show them every courtesy while they are here and make them feel that you are honored because they have come to visit you.

There are many things we can all learn through association with others in meetings like this and the member who wraps himself up selfishly in his own business is headed in the wrong direction for success in life. Let's all enter into the spirit of the convention and enjoy every minute of it. The report of the auditor will show that our association is in very good financial condition.

The Secretary's report was followed by the Question Box discussion. The subject was "Does it Pay to Coöperate with Your Neighbor?" led by George E. Pfarr, Akron, Ohio. Mr. Pfarr is President of the Ohio Hardware Association.

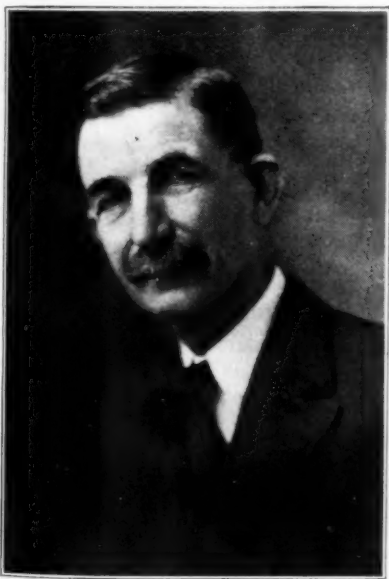
Does It Pay to Coöperate with Your Neighbor?

What are the disadvantages incurred by the lack of coöperation?

Some of them are:

The extra amount of mental strain we make for ourselves.

The extra amount of time we are giving to our neighbor's business by trying to see what and how much business he is doing.



Charles P. Moore, Vice-President West Virginia Hardware Association.

What price he is getting for his merchandise.

How far he is making deliveries.

The large amount of time and thought we are heaping upon our shoulders by trying to devise ways and means whereby we can take advantage of him in some form or other.

We often lose control of our tempers and make expressions we should by all means not think of.

We get sore when we hear of an old customer of ours purchasing an article from our neighbor—in many cases we not only get angry at our neighbor, but our customer as well.

What Is the Result?

Our neighbor sees his trade leaving him. He feels there is nothing else for him to do but fight back. We are not friendly to him and likewise neither is he to us. Both of us are selling our merchandise with very little profit, say nothing of a margin of profit which we must have in order to remain in business. At this time I am going to relate to you an incident which occurred in a town in Ohio.

A customer would go into one of the stores to buy a stove. He would get the price, and with some excuse would leave, peddle the price to the other merchant, who would show him a similar stove at less money. Then he would leave, return to the first store, peddle his second price, then farther reduction was made and so on until all the profit was gone and often more. Then to cap the climax the merchant who made the sale would feel so good about it that when delivery was made, would take the trouble of driving by his neighbor's store even though out of his way to give him the laugh.

Such cases were many in years gone by. Perhaps there are a few of them now. However, let us hope not.

Now friends, for the life of me I can not see how such transactions can take place where merchants are friends as they should be.

Friends, there is no question in my mind that if we continue to follow and adhere to our hostile attitude increasing our troubles, and taking away our rest, sooner or later the result very often will be over exertion, an elegant wide road leading to a nervous break-down, loss of religion, etc.

Inventory time comes along—it is taken, we stop and reflect, we ask ourselves the question what have we for all these years of hard work. In most cases we are compelled to console ourselves by admitting that he have had a living. But what kind of a living have we had. We must admit a hard one, putting in ten or twelve hours and more per day for just a living.

Sincerely are we not entitled to something more than just a living?

They say that all questions have two sides; let us look at the other side—

By doing so we find that in recent years, most of us look healthier, breath easier, get more out of life, take more enjoyment, in fact we seem to be living in a new world.

Why? Because we have very largely solved our problems.

By What Way?

By organization, coöperation and confidence, all of which were very vividly exemplified at the group meetings attended by your Secretary and myself during the past year.

We have found out that we can not exist by cutting our prices below the margin of profit we must have.

We are good friends—we have learned to love and respect one another inspired with the spirit of live and let live. We visit, tell stories, have our picnics, play pool, golf, indulge in other pleasures and pastimes.

I can remember the time and no doubt every one here can also, when we were

always knocking the other fellow and his merchandise. We long ago discovered that every knock is a boost, so we have quit that—instead of knocking, if we can not say anything good about our neighbor, we keep quiet.

Coöperative Buying Practiced.

We practice coöperative buying. In the smaller towns when it is not possible for one merchant to use, say a full car load of nails or a car of white lead or a car of screen wire and poultry netting, roofing and sheathing, etc., by



James B. Carson, Secretary-Treasurer, West Virginia Hardware Association.

being friendly, we make out our specifications, combine them, thereby taking advantage of the car load price and freight rate.

We want something to show our government that we are doing our part to help pay off the enormous debt that is such a serious question at this time.

I tell you friends, we were a long time waking up to the fact that more can be accomplished by being friendly, honest and sincere, than by using hostile methods.

We have got past the time when we thought we were so darned busy trying to break even. By overlooking which is to my opinion the most valuable asset we can have; that is, the making of a friend out of your so-called competitor.

Boys, the time to be friends in business instead of competitors is not coming, it is here.

Other lines of business are friends. Cities, states and nations all over the world are friends—why—because it pays. Why not fall in line ourselves. We will make better merchants, better husbands, better citizens and when our usefulness is over, we can look to the future with a better face, and mindful of the old phrase, "Peace on Earth and Good Will Toward Men."

The Question Box subject for Thursday's session was "What is it you want to know about your business?" and "Store arrangement and pricing goods." Everyone took part in these discussions and they were voted a howling success.

The banquet for members and ladies took place in Frederick Hotel.

Reports of Nominating and Resolutions Committees were heard Friday morning.

George Rehm, President Rehm Hardware, Oak Park, Illinois, Dies at His Home.

Funeral services were held Saturday afternoon, January 19, for

George Rehm, President of the Rehm Hardware Company, who died on Wednesday at his home, 128 South Cuyler avenue, Oak Park, Illinois.

Mr. Rehm was 73 years of age, and in addition to his widow, he is survived by four sons, Irving, Chester, Raymond and Alvin. Services were held at 2 p. m. at the Evangelical church, Marion and Ontario streets, Oak Park, Illinois. Burial was at Forest Home cemetery.

sized the necessity of better advertising, better displays of implements and hardware and better show windows where possible.

In the round-table advertising discussion, the speaker showed a number of stereopticon slides, re-

Advertising Round Table an Important Feature of Western Implement and Hardware Convention.

J. H. DeWild Tells Visiting Members at Kansas City Convention, January 15 to 17, Advertising Is Useless Unless It Renders a Service.

THE Thirty-fifth Annual Convention of the Western Retail Implement and Hardware Association opened its first session in the Missouri Theatre, Kansas City, Missouri, January 15.

Each session of the meeting was well attended by members anxious and enthusiastic to give and take

Secretary H. J. Hodge, Abilene, Kansas, made his report during the first session of the convention.

He made several recommendations pertinent to the questions on the List and Discount Method of Billing, Advertising, List Price of Products, Return Privilege on Repairs, Delayed Invoice Service, and the Standardization and elimination. While reading his address, he made verbal explanations to the recommendations wherever he thought them necessary for a clearer understanding of the principles involved.

The various services which the association affords its members were also reviewed by Secretary Hodge.

"Your Freight Audit Department has during the past year collected \$3,163.53, the total collections amounting to \$31,304.93; for the month of August the collections were over \$800.00; in October about \$500.00. Every dollar of these collections is velvet to you, and the service of this department in checking your expense bills is worth more than the expense of membership, even though no overcharges are found," said Secretary Hodge.

The Advertising Round Table was a big feature in the convention.

In speaking, J. H. DeWild, Manager of the Merchants Service Department of Ely & Walker Dry Goods Company, St. Louis, empha-



W. C. Cole.

producing examples of average advertising as clipped from a number of daily and weekly newspapers. These newspapers had been selected at random from seven states and "without exception," stated Mr. DeWild, "the advertisements are very poor, most of them being absolutely worthless."

Advertisement Must Create Desire.

"An advertisement to be successful," said the speaker, "must first of all attract favorable attention. The copy should be interesting, convincing and create a desire on the part of the prospective customer to the point of inducing a reply."

Advertising to be effective should go beyond the general announcement stage; must have descriptive, informative copy. Money spent for newspaper space that simply states in a sing-song fashion the names of name is a waste of money.

The speaker advocated increased use of direct mail literature, emphasizing the fact that the manufacturers and wholesalers often have attractive letters, folders or broadsides which can be sent to a dealer's mailing list. This literature, because of its being splendidly printed and illustrated, pulls satis-



H. J. Hodge, Secretary Western Implement and Hardware Association.

whatever was required of them and what was offered to them.

President A. W. Kavanaugh, Alva, Oklahoma, outlined the work which the association had accomplished during his administration, and made his recommendations for the coming year.

factory returns. The speaker further emphasized the point that advertising matter should go to prospects quite regularly. He stated that spasmodic sending out of literature is poor practice.

Lists Mailing Building.

In building up a mailing list, stated Mr. DeWild, dealers should, if possible, have an addressing machine that will carry the customer's full name and address. There is too much literature going out in the form of so-called "personal" letters which starts out "Dear Sir," "Dear Customer," "Dear Friend" or "Dear Madam." This sort of salutation fails to impress the prospect who generally is quite personally known to the dealer. For instance, a farmer coming into the store and being greeted with the familiar salutation "Hello, Bill," and slapped on the back in a friendly manner, feels entirely different when he reaches home and receives a letter from this same dealer or merchant which starts out with "Dear Sir."

The speaker stressed the point that it is well worth the expense and time to have most letters personally filled in with the recipient's name and address and if possible, "Dear Bill" or "Dear Jim" or whatever the letter may require.

Letters going out to the young ladies, stated the speaker, fail to rouse any great amount of enthusiasm when the salutation is "Dear Madam." You may imagine a young lady just out of college and living in the country who is quite prominent in society, receiving a letter from her local merchant with no other salutation than "Dear Madam." Particularly do such letters receive chilly consideration if they are poorly mimeographed or poorly Multigraphed. Unless a personal letter is neatly done, it should not go out in the guise of a personal letter.

Quoting from *Postage*, a well known, Direct-Mail publication published in New York, the speaker read the following concerning personal letters:

"Remember, the first thing about the letter (your letter) that is no-

ticed, is the name, then the opening.

"The recipient wants to know if it is for him—or her—and what it is about.

"If the recipient's name is at the top, where they would naturally look for it, they know it is for them and will look with more interest to see what it is about."

Round Table Discussion.

In the round-table discussion Wednesday afternoon, much the same program was carried out and dealers were present who desired to have their advertising criticised and suggestions made. In addition to the examples shown by the speaker, a great quantity of advertising was also brought in by Secretary Hodge, which contained valuable information.

Another point of interest was the exhibition of a number of window backgrounds, practical even to the smallest one. These were made from wall board and easily made by the merchants themselves. Several slides showing window trims of a seasonal nature were also shown. The speaker was insistent on the point of dealers being ahead of the seasons in their window trims. Suggestions for displays were given of hardware and implements.

On Wednesday afternoon, Mr. DeWild gave a demonstration in showcard writing. This was unique in that instead of being a plain making of showcards and drawing of alphabets, the speaker demonstrated from a slide shown on the screen, the fundamentals of an easily made *Speedball Pen* alphabet which can be mastered within a short time by any individual.

Importance of Show Card Displays.

The illustrated slides showed how easily the letters can be made and the fundamental strokes were plainly shown. The speaker deplored the fact that in many of the smaller town and cities so few showcards are shown in windows and about the stores and display rooms. He suggested to the dealers that if they had no one in their own store or implement house who could do this kind of work, they obtain some of the practice charts which the speak-

er had with him and give some boy or girl in their home town a chance to take up showcard writing and become sufficiently proficient to do ordinary work. There is now no necessity, stated the speaker, for anyone not having sufficient showcards and price tickets around their place of business. A lack of these indications of good selling simply is an indication that the merchant has not pep enough for even finding a method of getting this work done. If it can be successfully carried out in some small towns, it can be made a success in others. Mr. DeWild has suggested that he will furnish these charts to anyone who may be interested.

Another interesting part of the exhibition was the showcard class which Mr. DeWild held, explaining where supplies for this work might be obtained.

Wants Repairs for Wringer on Alamo Double Washer No. 3.

TO AMERICAN ARTISAN:

Can you tell us where we can secure repairs for wringer on Alamo Double Washer No. 3?

Yours very truly,
JOHNSON PLUMBING AND HEATING
COMPANY.

—, Iowa, January 10, 1924.

Not Blowing Our Own Horn— Our Friends Do It for Us.

TO AMERICAN ARTISAN:

Will you kindly renew my subscription for 1924?

In this connection, I wish to state that I have enjoyed AMERICAN ARTISAN, issue by issue and page by page, for several years. I have not only found it to be a personal pleasure to read its pages, but it has proven to be a commercial benefit, in the way of a buyer's guide.

We are located in a town of 1,800 people, with a modern store in every respect, and have often been complimented in having the most up-to-date store in the state for the size of the town.

But we are not so selfish as to give ourselves the entire credit for the arrangements and manner in

which our store and business is run:

We used AMERICAN ARTISAN to guide our steps aright.

And now thanking you for past favors and wishing you a happy and prosperous New Year, we are,

Yours truly,

WRIGHT & PATTERSON.

L. E. WRIGHT.

Bethesda, Ohio, January 8, 1924.

Why Some Clerks Don't Get On.

They talk a great deal, but say very little, because they do no thinking or studying.

They look into everything, but see nothing, because their brains are not developed.

They have a hundred irons in the fire, but none of them are hot enough to be welded.

When told to do anything, they stand around and ask questions instead of going to work and using their intelligence.

If called upon in an emergency, they tell you that this or that is the work of some one else—that it is not their work.

They are half-hearted and lacking in energy, originality, push and perseverance.

They are not reliable.

Their minds are not on their work.

They are careless and make mistakes.

They think only of their salaries.

They are superficial and do nothing well or thoroughly.

Coming Conventions

Mountain States Hardware and Implement Association Convention, City Auditorium, Denver, Colorado, January 22-24, 1924. W. W. McAlister, Secretary-Treasurer, Boulder, Colorado.

Kentucky Hardware and Implement Association, Louisville, January 22-25, 1924. J. M. Stone, Secretary-Treasurer, 202 Republic Building, Louisville.

Sheet Metal Contractors' Association of Indiana, Hotel Severin, Indianapolis, January 29 and 30. Leslie W. Beach, Richmond, Indiana, is Secretary.

Indiana Retail Hardware Association, Inc., Convention and Exhibition, Cadle Tabernacle, Indianapolis, January 29, 30, 31, February 1, 1924. G. F. Sheely, Secretary, Argos.

Nebraska Retail Hardware Association,

Lincoln, Nebraska, February 5 to 8, 1924. George H. Dietz, Lincoln Nebraska, Secretary-Treasurer.

Wisconsin Retail Hardware Association Convention and Exhibition, Milwaukee Auditorium, February 6, 7, 8, 1924. George W. Kornely, Manager of Exhibits, 1476 Green Bay Avenue, Milwaukee. P. J. Jacobs, Secretary-Treasurer, Stevens Point.

Michigan Retail Hardware Convention and Exhibition, Grand Rapids, February 12, 13, 14, 1924. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids. A. J. Scott, Secretary, Marine City, Michigan.

Iowa Retail Hardware Association, Des Moines, Iowa, February 12, 13, 14 and 15, 1924. A. R. Sale, Secretary-Treasurer, Mason City, Iowa.

The Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, Convention and Exhibition at the Philadelphia Commercial Museum, Philadelphia, Pennsylvania, February 12, 13, 14 and 15, 1924. Sharon E. Jones, Secretary-Treasurer, Wesley Building, Philadelphia.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 19, 20 and 21, 1924. Leon D. Nish, Secretary-Treasurer, Elgin, Illinois.

Ohio Hardware Association, Convention and Exhibition, Cincinnati, Ohio, February 19, 20, 21 and 22, 1924. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

New York Retail Hardware Association Convention and Exhibition, February 19, 20, 21, 22, 1924. Headquarters, McAlpin Hotel, and exhibition at Seventy-first Regiment Armory. John B. Foley, Secretary, 412-413 City Bank Building, Syracuse, New York.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, February 20, 21, 22, 1924. George A. Field, Secretary, 10 High Street, Boston, Massachusetts.

North Dakota Retail Hardware Association Convention and Exhibition, Municipal Auditorium, Fargo, February 20, 21, 22, 1924. C. N. Barnes, Secretary, Grand Forks.

Michigan Sheet Metal and Roofing Contractors' Association, February 25 to 28, 1924, Hotel Kerns, Lansing. F. E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

Missouri Retail Hardware Association Convention and Exhibition, Marquette Hotel, St. Louis, February 26, 27 and 28, 1924. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis.

Minnesota Retail Hardware Association Convention and Exposition, St. Paul Auditorium, February 26, 27, 28, 29, 1924. C. H. Casey, Secretary, Jordan, Minnesota.

California Retail Hardware Implement Association Convention and Exhibition, Civic Auditorium, San Francisco, March 18, 19, 20, 21, 22, 1924. LeRoy Smith, Treasurer, 112 Market Street, San Francisco.

Southeastern Retail Hardware and Implement Association, composed of Alabama, Florida, Georgia and Tennessee. Convention and Exhibition, Atlanta, Georgia, May 27, 28, 29, 1924. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta.

Hardware Association of the Carolinas Convention, Wrightsville Beach, North

Carolina, June 17, 18, 19, 1924. T. W. Dixon, Secretary-Treasurer, 717-718 Commercial Bank Building, Charlotte, North Carolina.

South Dakota Retail Hardware Association and Exposition, Coliseum Building, Sioux Falls, March 4, 5, 6, 7, 1924. C. H. Casey, Secretary, Jordan, Minnesota.

Spring Convention of American Hardware Manufacturers' Association, Roosevelt Hotel, New Orleans, Louisiana, April 8, 9, 10 and 11, 1924. Frederick D. Mitchell, Secretary-Treasurer, 1819 Broadway, New York City.

Annual Convention of Southern Hardware Jobbers' Association, April 8, 9, 10 and 11, 1924, at Roosevelt Hotel, New Orleans, Louisiana. John Donnan, Secretary-Treasurer, Room 821, American National Bank Building, Richmond, Virginia.

National Warm Air Heating and Ventilating Association Convention, Hotel Winton, Cleveland, Ohio, April 16 and 17, 1924. Allen W. Williams, 52 West Gay Street, Columbus, Ohio, Secretary.

Retail Hardware Doings

Illinois.

Jim Walker and Lloyd Brown have purchased the W. L. Alexander Mercantile Company at 13 West Side Square, Jacksonville.

The F. E. Kelly Hardware store at Galva has been purchased by Hatherty and Elblom, present proprietors of a tin and plumbing shop in Galva.

Iowa.

After thirty-two years of continuous business at the same location, E. A. Stephenson has sold his interest in the Stephenson Hardware Company at Lowell to J. C. Jackman. The firm will hereafter be known as the Watton-Jackman Hardware Company.

P. M. Meade of Brighton has moved his stock of hardware and implements from the McCoy Building to the Brier corner room.

Tupper and Odden's hardware store at Osage has been damaged by fire.

Carl Arnold of Portsmouth has purchased the Hilyard-Liston hardware store at Cumberland.

Massachusetts.

Edmund L. Dragon and R. L. Streeter have organized a new hardware concern under the name of Dragon and Streeter, and expect to be open for business at 423 High Street, Holyoke, by February 15th.

Nebraska.

C. J. Werner has sold his business and hardware stock at Wymore to Roy Howe.

Oregon.

Bend Hardware Company, Bend, has been incorporated with a capital of \$25,000. Incorporators are: George J. Childs, A. O. Schillings and F. Dement.

Pennsylvania.

At Danville, fire of unknown origin badly damaged the Welliver Hardware Company's warehouse.

Texas.

The McAllen Hardware Company and the Borderland Hardware Company of McAllen have been consolidated.

To Increase New Range Sales Make Satisfactory Disposition of Old Stove for Customer

Take Advantage of This Point in Your Advertisements in Addition to Economy and Dependability Features.

EVERY retail stove merchant got up on his toes with the advent of 1924, and from now on the stove sale cash register will sing a merry tune—it will if the right kind of action is taken by the individual to whose ears the sound of a cash register “sale” ring is music, and we don’t mean maybe.

Regardless of what other methods the retail stove merchant employs to increase his stock turn, there is one problem which he cannot overlook—not even if he would—and that is the question of what disposition can be made of the old stove. Answer that question satisfactorily for the person to whom you wish to sell, and you remove one of the greatest stumbling blocks which confronts the salesman today. Sooner or later you’ve got to meet this question and the sooner you do, the sooner you will be able to place the new range where the old one threatened to stand for another year.

This question is not confined to the stove industry by any means. Divers methods have been devised for the disposition of used automobiles, and in this latter field the unscrupulous dealer in used cars became so numerous and obnoxious to the legitimate salesman that the poor car owner crawled back into his cell and decided not to buy in sheer desperation. This was very discouraging to the legitimate automobile salesman, and, of course, as was to be expected, the salesman got together and formed a plan of disposing of used cars which was advantageous to the customer first and then to the dealer himself.

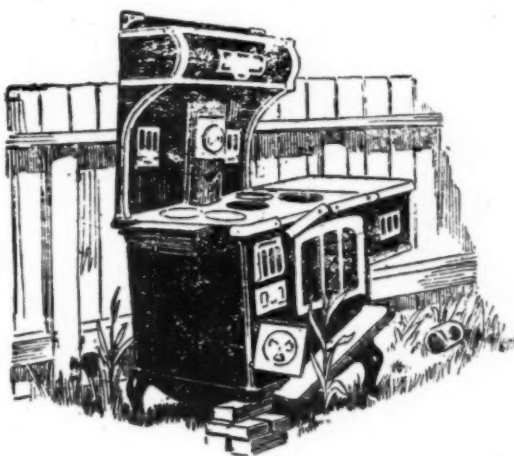
We merely mention this because it illustrates what other industries have been up against with this same problem, in order to show how they have met the problem so as to satisfy the customer.

We may for convenience say that

the potential customers of every retail stove merchant are divided into two classes; namely, those who demand the best and latest development, and those who are perfectly satisfied to buy a rebuilt stove.

Now, if you were to make it pos-

sible for a man in class A to dispose of his old stove at a reasonable figure, you are not only making that sale, but you are also releasing the rebuilt stove so that it becomes available for the man in class B, thus making two sales. And the beauty



When Your Range Wears Out—Consider Why

Is it broken?

Is it rusted out?

Has it grown so wasteful of fuel and generally unsatisfactory that you have to discard it?

Or, is it getting to look so badly that you just want a new one?

No matter what your experience has been, note this:

Whatever is the reason for discarding your old range—that thing cannot possibly happen to the Monarch.

The Monarch is made of malleable iron that cannot break.

The Monarch is protected against rusting out by its Virrifused Flues.

The Monarch's riveted joints stay tight forever so that it gives the same satisfactory and economical service after years of use as when new.

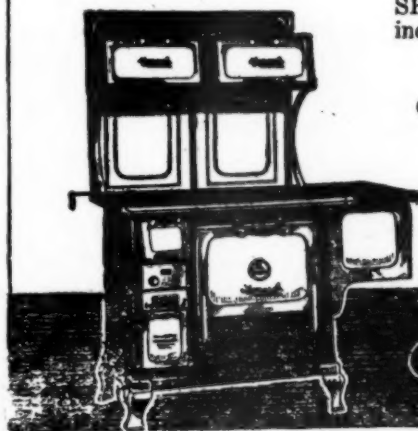
The Monarch is easy to keep clean and looking like new for many, many years.

Come and let us tell you all about this wonderful range. Our prices are most attractive — investigate them now.

SPECIAL—Prices are \$100.00 for 19 inch oven range.

G. M. NICHOLSON

COMPLETE HOME FURNISHINGS AND FUNERAL DIRECTING



Monarch
MALLEABLE

Figure 1.—Playing Up Structural Durability in Stove Advertising.

of it all is that the two customers are better satisfied; the first because he has been able to procure the new stove or range with all the latest developments, and the second because he has received a rebuilt stove from a reliable dealer which will serve his purposes.

Of course, no one would advocate selling a rebuilt stove to a man who was a possible prospect for a new range. But your aim is to satisfy two very different types of people, and you have got to satisfy them if you expect to make permanent customers of them.

Now, the vehicle which you will use to instruct your possible customers is, of course, advertising. It can't be anything else. Three-fourths of all the buying done in this country today is done by the women, and the greater share of the other fourth is done due to the women's influences. All right! Then appeal to the women in your advertising, and above all tell the truth. You'll get farther and sell

more stoves that way than any other.

In Figure No. 1 we have reproduced a stove advertisement of G. M. Nicholson, Newman, Illinois, pushing the Monarch range.

The ad is got up very well and is bound to attract attention. The appeal is clearly and definitely defined and the illustrations are also good.

Some action could have been profitably introduced which would have added pulling power to the ad.

In Figure No. 2 is seen the passive type of stove advertisement. It is passive because there is nothing in the ad which would create a desire to own a Red Cross coal-gas range in preference to some one of the other very numerous makes.

The advertisement perhaps served the purpose for which it was constructed to a satisfactory degree, but were it to come into direct competition with other ads offering similar products, it may possibly suffer.

In Figure No. 3 is found a decidedly progressive advertisement, a sort of "reason why" copy, with an attention attracting headline.

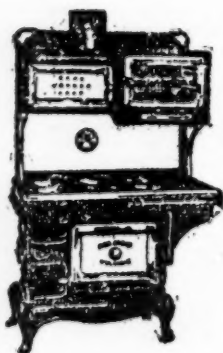
In Figures 4 and 5 again we see an effort made to move stoves by playing up the usefulness, as well as substantial construction.

This is not enough, however, for copy meeting keen competition. Superlatives should be omitted from advertisements. Superlatives only express superiority when used properly; when used to excess as they have been in advertising they don't mean anything.

Some hints about good buying may not be amiss at the beginning of the new year.

Good buying is one of the best safeguards against the accumulation of dead stock. Good buying does not consist in getting the goods at the lowest possible figure, but rather in gauging accurately the quantity of any article that your community will absorb within a given time. If your possible sales of an article inside a reasonable time are, at the most, two or three dozen, it is not good buying to order a gross on the chance that you will sell them just for the sake of a somewhat lower price. For what you gain on the

The RED CROSS Coal-Gas Range



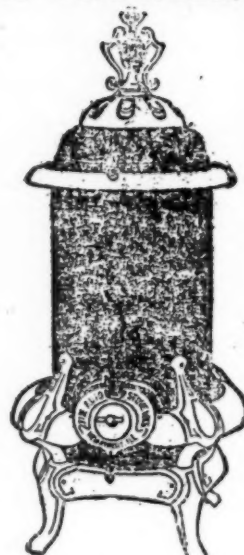
SOLD BY

J.A.BEST & CO.

440 North 10th St.

Figure 2.—Passive Type of Advertising.

Get Ready For Cold Weather

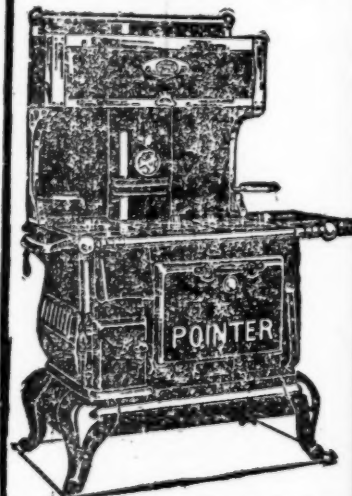


Auto Hot Blast Heaters

INSURE PROPER
HEATING

Don't delay buying that Heating Stoves, as cold weather will soon be here. The Auto Hot Blast offers everything to be desired in a heating stove. We have a size to suit your need. Priced according to size from

\$29.00 DOWN TO \$10.50



POINTER RANGES

BAKE BEST

A wonderful Range, made to last. A fuel saver in every sense of the word. Bakes evenly and perfectly. Contains many features not found in other coal ranges.

Priced From \$52.50 Down to \$45.00

J. O. Sourbeer & Co.

204-206 E. Main St.

"Your Neighbor Trades With Us. Why Not You?"

articles you sell will be lost, perhaps many times over, in the articles you have to carry over from year to year or ultimately to sell at a sacrifice.

A fruitful source of dead stock is a momentary selling enthusiasm for some line of goods. The traveler gets you enthused, fills your mind with brilliant schemes for putting the stuff across, and you order more than you should. By the time the goods arrive your enthusiasm has pretty well evaporated. You find that selling the stuff is going to be a bigger job than you imagined. The result is that you put the goods in stock and leave them to sell themselves—and ultimately you take a loss in order to unload them.

Learn to read your inventories intelligently.

Stockholders Bridge & Beach Manufacturing, St. Louis, Elect New Directors and Officers.

At the Stockholders' meeting of the Bridge & Beach Manufacturing

Company, St. Louis, Missouri, Tuesday, January 15th, the following directors were re-elected: Hudson E. Bridge, L. H. Booch, Henry C. Hoener, John F. Shepley, Louis H. Riecke, Laurence D. Bridge, and

dent, Henry C. Hoener; Secretary, Louis H. Riecke; Superintendent, Laurence D. Bridge; Assistant Secretary, George Leighton Bridge; Assistant Treasurer, A. F. Gam-meter.

AKRON'S POPULAR STOVE STORE

We are offering the largest line of the most up-to-date stoves manufactured today featuring all the very latest improvements and conveniences. Every stove buyer should see the 200 different styles of gas and coal stoves for cooking and heating, which we are showing on our sample floor.



Reliable Gas Ranges

Reliable stoves are equipped with the **LORAIN HEAT REGULATOR** which is the greatest help in baking and cooking and one of the most valuable improvements to the operation of a gas range. Reliable stoves are attractive, durable and economical in consumption of fuel.

See the Domestic and New Akron Gas Ranges

The World Wonderful Florence Hot Blast Air-Tight Heating Stoves

give you more heat than other stoves because they burn the smoke and coal gases, which usually go to waste thru the chimney. Reduces your coal bill and doubles your heating capacity.

Buy the Best And Enjoy the Best



THE BORN STEEL COAL RANGES with the new improvements are now shown on our floor. You will "im' it a dandy!"

KITCHEN HARDWARE AND LAUNDRY APPLIANCES

THE MEESE-REINKER CO.

16-18 N. Howard St.—8 Doors North of Market St.

Figure 4.—Why Not Display Some Action in Advertisement Illustrations?

George Leighton Bridge. The Board elected the following officers: President and Treasurer, Hudson E. Bridge; Vice-President and Manager, L. H. Booch; Vice-Presi-

Warmack-Williams Stove Company, Arkansas, to Purchase New Equipment.

New equipment will be purchased probably for the plant of the Warmack-Williams Stove Company, 1601 North Sixth Street, Fort Smith, Arkansas. The company recently was incorporated for \$30,000 to manufacture gas stoves and ranges. George Warmack is president; George H. Williams, vice-president; Hill Williams, secretary and treasurer, and John Warmack, general manager.

The same men hold the same offices in the recently incorporated Fort Smith Stove & Foundry Company, South Fort Smith, Arkansas. This company has a capitalization of \$30,000 and will manufacture wood and coal stoves and also will conduct a general foundry business.

Rockford Stove Works, Tennessee, to Increase Size of Plant.

The Rockford Stove Works, Rockford, Tennessee, is making arrangements to increase its plant through the addition of a department to make hot blast heaters and nickel castings. Harry Howard is manager of the plant.



New Globe Hot Blast



Correct in principle—beautiful in design—heavily nicked—faultlessly constructed—a perfect stove for all kinds of fuel.

Yes, it actually burns every particle of smoke in this stove. The result is just twice the heat. Smoke is nothing more than unburned coal. Why not use this unburned coal?

In offering you the new Globe Hot-Blast we can truthfully say that it is the greatest soft coal burner in the world; a stove that is in a class by itself—a stove without a competitor. We claim that our new heater will burn any kind of fuel more economically, will consume the smoke and soot more completely, will heat the base, floor and room more thoroughly, and will hold fire just as long as any heater ever made.

I. C. Porter Hardware Co.

Just Three Doors North of Sandusky St.

Figure 5.—Smoke Burning Feature Makes Good Advertising Point. Avoid Superlatives. They Don't Mean Anything.

Business Outlook Strengthened By Gain in Unfilled Orders and Rise in Credit Resources

Weakness of All Foreign Exchanges Exerts Depressing Influence on Non-Ferrous Metals—Bituminous Coal Strike Threatened for April 1.

THE domestic outlook has been decidedly strengthened by recent events. Most important of these have been the gain in unfilled orders, the better prospects for the Mellon bill in congress and the rise of credit resources.

Abroad the situation is badly mixed. French and British exchanges continue extremely weak, just as the expert commission to examine Germany's fiscal condition starts its work. The presence of able American financiers upon this committee gives promise that it may offer the world some solution of the reparation problem.

Sterling is down partly because liquid capital is fleeing to America, against the expected rise of labor to full power. The expressions of Ramsey MacDonald have been reassuringly moderate, yet a capital levy is part of labor's program.

The Supreme Court decision, last Monday, upholding the recapture clause of the Transportation Act of 1920, is undoubtedly, largely responsible for this week's buying movement in the low priced railroad stocks and bonds. It is expected that half of the excess earnings (above 6 per cent) of the prosperous roads will be turned over to and used for the benefit of the most needy roads.

Copper.

Business in copper is without improvement. Producers are freer sellers at concessions. Electrolytic is offered today at 12.50 cents delivered for shipment over the first quarter of this year. Second hands are reluctantly following producers.

Consumers remain very conservative, showing small disposition to increase buying even at 12.50 cents delivered. Some larger orders, however, are understood to have been placed recently by foreign consumers.

The further drop noted in prices in Europe today was more the result of depressed sterling exchange than of larger offerings by dealers.

Chicago sheet copper price was held 20¼ cents; mill base, 19½ cents.

Tin.

Tin prices have risen over 49.00 cents for spot in the face of declining exchange rates. Spot has been commanding a premium of ½ cent in New York, due to scarcity of January arrivals, but no immediate pinch for tin is manifest. January deliveries are estimated to be not over 5,200 tons, probably less as stormy weather is delaying some steamers.

The tin market this week has been largely a professional affair and the advance in prices was brought about by operators' purchases both here and in London. This buying, however, came from influential quarters and was of the nature that invariably affects prices. The rise in London amounted to £8 15s on prompts and £8 5s on futures and about 1½ cents to 1⅝ cents New York.

The general situation as regards supply and demand is the same as previously outlined and with consumption running in excess of production, an acute scarcity is only prevented by the release of the Pool stocks in the East.

Pig and bar tin Chicago quotations were 50.12½ and 52.12½ respectively.

Zinc.

The zinc market has experienced active buying by galvanizers for first quarter shipment, but the past two days the market has been quiet and prices eased to 6.35 cents, East St. Louis, for prompt shipment.

A fair interest also has been shown in brass special, at 10 points

premium over prime western.

December deliveries increased a little.

The American Zinc Institute statistics for December show that the production of slab zinc during that month was 46,485 tons, and the shipments were 40,811 tons, so that the stocks in smelters' hands were increased 5,674 tons, the amount on hand December 31st being 36,578 tons.

Lead.

The lead market has continued extremely strong, with sales of January and February shipment at 8 cents, East St. Louis and 8.25 cents, New York, while March-April shipments have sold at 7.90 cents, East St. Louis, the contract price of the leading interest, established January 10.

American pig lead Chicago quotations were, 8.25; bar, 9.50.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, \$31.75; Commercial, 45-55, \$31.00, and Plumbers', \$29.75, all per 100 pounds.

Wire and Nails.

Makers of wire and wire products at Chicago find their business increasing weekly. Operations, however, have not yet been changed as increased demand found stocks fairly large. The fencing business is getting into its spring stride. Demand for nails is good. Although jobbers have bought heavily of wire and wire products it is evident they have not placed all of their first quarter needs. Prices are well maintained.

Bolts and Nuts.

Specifications for bolts and nuts at Chicago continue good and although one maker is not finding business up to its liking, the general

situation is splendid. Implement makers look for the best season in several years and have been specifying bolts and nuts freely. Specifications from automotive interests are good. Jobbers are specifying freely but apparently stocked well before the recent firming in price. Prices are holding at 60 and 10 off.

Tin Plate.

Specifications from many tin plate users due for March shipment have already been received. With one producer, three of its large customers already have specified for March delivery also and 1,500,000 base boxes additional are expected to be specified within the next two or three days.

Larger tin plate consumption is promised for 1924 and is practically assured if the present rate of absorption by canmakers is any criterion.

With heavy backlogs tin plate prices are firm on the basis of \$5.50 per base box of 100 pounds, Pittsburgh. Independents are averaging between 90 and 95 per cent, some operating practically full.

Relatively few inquiries are appearing since most buyers have protected themselves.

One piece of new business involving 80,000 base boxes was recently closed by a large maker here.

Sheets.

Much of the present sheet business being written on the books of sheetmakers is in the form of actual specifications against contracts which as yet have not been signed. This is particularly true of full finished automobile sheets, the buying of which is continuing at a high rate. Stocks everywhere are low and all purchases are for immediate shipment.

Consumption apparently is proceeding at a high rate and this is true of other lines since diversified buying is the rule among practically all sheet producers.

Prices are fairly firm, only an exceedingly small percentage of the output of black sheets being available at under 3.85 cents; blue annealed being firm at 3.00 cents; gal-

vanized being available only occasionally at under 5.00 cents, and full finished automobile sheets having firmed up considerably on the basis of 5.35 cents until between 90 and 95 per cent of the full finished sheet output of the country is being sold on that basis.

Sheet manufacturers are greatly encouraged over the prospects for the first half and report that both users and jobbers are buying heavily for first quarter delivery with some willing to talk about second quarter requirements, since a bituminous coal strike for April 1 is threatened.

Pig Iron Buying Fair and Prices Hold Well; Industry Operating at 75 Per Cent Capacity.

Orders Booked for First Half of January Show Considerable Improvement—Marked Gains from Implement Industry.

ANOTHER coal miners' strike in April is expected by the steel industry. To what extent such a tieup would check the recovery in general business is, of course, problematical. But the steel mills are preparing for the contingency by piling up the largest coal reserves in their history.

"The approach of the soft coal conference in Florida has brought up the possibilities of a strike and its effect on the steel industry," the *Iron Age* says. "Opinion leans to the expectation of a strike and a later compromise, with non-union fields meanwhile making a larger contribution to steel works than in the strike of 1922." The *Iron Trade* comments that "Talk of a possible coal strike in April is beginning to receive attention from buyers and sellers and is having some influence on future policies."

Otherwise, the situation is fairly good. The industry as a whole is operating around 75 per cent of capacity, with the Steel corporation doing about 85 per cent. This is, in both cases, a gain of about 5 per cent over December.

The Chicago district is making the best showing, but in all districts there is gradual resumption of idle furnaces.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.50 to \$18.00; old iron axles, \$26.00 to \$26.50; steel springs, \$19.25 to \$19.75; No. 1 wrought iron, \$15.50 to \$16.00; No. 1 cast, \$18.00 to \$18.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pounds: Light copper, 9½ cents; light brass, 6 cents; lead, 4½ cents; zinc, 4 cents, and cast aluminum, 16 cents.

Orders booked during the first half of January showed a considerable improvement, with marked gains from the farm implement industry and continued generous buying by the railroads, which last week purchased 4,277 cars. Heavy orders from automobile plants also mark the resumption of higher production schedules in that industry, which expects to operate practically at capacity during the first half of this year.

With heavy melting steel selling above basic pig iron at certain points in the Pittsburgh district, considerable activity, much of it of speculative character, has been stimulated in the latter grade. Cleveland sellers have inquiry for about 75,000 tons of basic iron which includes tonnage for two Ohio steel plants in addition to a large amount for brokers. Valley basic is well held at \$22 though late sales have been made at \$21 western Pennsylvania furnace. In general, pig iron buying is fair with prices holding well.

Southern iron is stronger with sales at \$22 Birmingham.

The scrap market is strong with some grades scarcer. A Wheeling interest bought 12,000 to 15,000 tons of heavy melting steel at \$22 delivered.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

FIG IRON.

Chicago Foundry..	23 50
Southern Fdy. No. 2	27 01 to 28 01
Lake Sup. Char. coal	29 04
Malleable	23 50

FIRST QUALITY BRIGHT TIN PLATES.

	Per Box
IC 14x20 112 sheets	\$12 45
IX 14x20	14 05
IXX 14x20 56 sheets	17 57
IXXX 14x20	18 12
IXXXX 14x20	18 65
IC 20x28 112 sheets	27 50
IX 20x28	29 85
IXX 20x28 56 sheets	16 15
IXXX 20x28	17 20
IXXXX 20x28	18 25

TERNE PLATES.

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 60
IX 20x28, 40-lb.	28 50
IC 20x28, 30-lb.	21 80
IX 20x28, 30-lb.	24 70
IC 20x28, 25-lb.	20 80
IX 20x28, 25-lb.	23 70
IC 20x28, 20-lb.	18 30
IX 20x28, 20-lb.	21 15
IC 20x28, 15-lb.	17 05
IX 20x28, 15-lb.	15 75
IC 20x28, 12-lb.	14 05
IX 20x28, 8-lb.	14 05

COKE PLATES.

Cokes, 80 lbs., base, 20x28.	\$13 85
Cokes, 90 lbs., base, 20x28.	14 10
Cokes, 100 lbs., base, 20x28.	14 45
Cokes, 107 lbs., base, IC	
20x28	14 85
Cokes, 135 lbs., base, IX	
20x28	17 40
Cokes, 155 lbs., base, 56 sheets	9 75
Cokes, 175 lbs., base, 56 sheets	10 65
Cokes, 195 lbs., base, 56 sheets	11 70

BLUE ANNEALED SHEETS.

Base	per 100 lbs. \$3 50
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ONE PASS COLD ROLLED BLACK.

No. 18-20	per 100 lbs. \$4 50
No. 22-24	per 100 lbs. 4 55
No. 26	per 100 lbs. 4 60
No. 27	per 100 lbs. 4 65
No. 28	per 100 lbs. 4 70
No. 29	per 100 lbs. 4 75

GALVANIZED.

No. 16	per 100 lbs. \$5 10
No. 18-20	per 100 lbs. 5 25
No. 22-24	per 100 lbs. 5 40
No. 26	per 100 lbs. 5 55
No. 27	per 100 lbs. 5 70
No. 28	per 100 lbs. 5 85
No. 30	per 100 lbs. 6 35

BAR SOLDER.

Warranted, 50-50	per 100 lbs. 31 75
Commercial, 45-55	per 100 lbs. 31 00
Plumbers	per 100 lbs. 29 75

ZINC.

In Slabs	7 45
----------	------

SHEET ZINC.

Cask lots, stock, 100 lbs.	11 00
Less than cask lots, 100 lbs.	11 50

BRASS.

Sheets, Chicago base	19 1/4c
Mill Base	17 1/4c
Tubing, brazed, base	24 1/4c
Wire, base	17 1/4c

COPPER.

Sheets, Chicago base	20 1/4c
Mill base	19 1/4c
Tubing, seamless, base	23c
Wire, No. 9 & 10 B. & S. Ga.	16 1/2c
Wire, No. 11, B. & S. Ga.	16 1/2c

LEAD.

American Pig	\$8 25
Bar	9 50

Sheet, Full Coils	per 100 lbs. 10 75
Cut Coils	per 100 lbs. 11 75

TIN.

Pig Tin	per 100 lbs. 50 12 1/2
Bar Tin	per 100 lbs. 52 12 1/2

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ADZES.

Coopers', Barton's	Net
White's	Net

AMMUNITION.

Shells, Loaded, Peters, Loaded with Black Powder 18% Loaded with Smokeless Powder	18%
Winchester, Smokeless Repeater	
Grade	20 & 4%
Smokeless Leader	20 & 4%
Grade	20 & 4%
Black Powder	20 & 4%

U. M. C.

Nitro Club	20 & 4%
Arrow	20 & 4%
New Club	20 & 4%

Gun Wads—per 1000.

Winchester 7-8 gauge 10&7 1/2%	
" 9-10 gauge 10&7 1/2%	
" 11-28 gauge 10&7 1/2%	

ASBESTOS.

Paper up to 1/16	6c per lb.
Rollboard	6 1/4c per lb.
Millboard 3/32 to 1/2	6c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6.00 per roll

AUGERS.

Boring Machine	40&10%
Carpenter's Nut	50%

Hollow.

Stearns, No. 4, doz.	\$11 50
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Post Hole.

Iwan's Post Hole and Well	35%
Vaughan's, 4 to 9 in.	\$15 60

AXES.

First Quality, Single Bitted (unhanded), 3 to 4 lb., per doz.	\$14 00
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Good Quality, Single Bitted, same weight, per doz.

	13 00
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BARS, CROW.

Steel, 4 ft., 10 lb.	\$ 80
Steel, 5 ft., 18 lb.	1 40
Pinch Bars, 5 1/2 ft., 24 lb.	1 60

BARS, WRECKING.

V. & B. No. 12	\$0 34
V. & B. No. 24	0 43
V. & B. No. 324	0 57
V. & B. No. 30	0 48
V. & B. No. 330	0 63

BITS.

All Vaughan and Bushnell, Screw Driver, No. 30, each	\$ 27
Screw Driver, No. 1, each	16
Reamer, No. 80, each	41
Reamer, No. 100, each	41
Countersink, No. 13, each	20
Countersink, Nos. 14-15, each	27

BLADES, SAW.

Wood, Atkins 30-in. Nos.	6 40 26
	\$8 90 \$9 45 \$5 40

BLOCKS.

Wooden	45%
Patent	45%

BLOW TORCHES (See Firepots).

BOARDS.

Stove, Crystal, 33"	Per Doz. \$23 90
---------------------	------------------

Wash.

No. 760, Banner Globe (single)	per doz. \$5 25
No. 652, Banner Globe (single)	per doz. 6 75
No. 801, Brass King,	per doz. 8 25
No. 860, Single—Plain Pump	6 25

BOLTS.

Carriage, Machine, etc. Carriage, cut thread, 1/2x6 and sizes smaller and shorter	50%
Carriage sizes, larger and smaller and shorter	50-10%
Machine, 1/2x4 and sizes smaller and shorter	50-5%
Machine, sizes larger and longer than 1/2x4	50-10-5%
Stove	70-10%

BRACES, RATCHET.

V. & B. No. 444 8 in.	\$4 54
V. & B. No. 222 8 in.	3 89
V. & B. No. 111 8 in.	3 55
V. & B. No. 11 8 in.	3 02

BRUSHES.

Hot Air Pipe Cleaning, Bristle, with handle, each	\$0 85
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Flue Cleaning.

Steel Only, each	\$1 25
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BURRS.

Copper Burrs only	40%
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BUTTS.

Steel, antique copper or dull brass finish—case lots—3 1/2x3 1/2—per dozen pairs	\$3 12
4x4	4 00

Heavy Bevel steel inside sets, case lots—

	per dozen sets 7 80
--	---------------------

Steel bit keyed front door sets, each

	1 90
--	------

Wrought brass bit keyed front door sets, each

	3 25
--	------

Cylinder front door sets, each

	7 50
--	------

CEMENT, FURNACE.

American Seal, 5 lb. cans, net	\$ 45
" 50-lb. cans, "	90
" 25 lb. cans, "	2 00
Asbestos, 5 lb. cans, net	45
Pecora	per 100 lbs. 7 51

CHAINS.

Sher. Steel Safety Chain, 500-ft. coll. per ft.	.01 1/2
100 to 500 ft., per ft.	.02
Less than 100 ft., per ft.	.02 1/2

Iron Jack Chains.

Box (12 yds.)	45
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CHIMNEY TOPS.

Iwan's Complete Rev. & Vent.	30%
Iwan's Iron Mountain only.	35%
Standard	30 to 40%

CHISELS.

Cold, V. & B. No. 25, 1/4 in., each	\$0 26
V. & B. No. 25, 1/2 in., each	41

Diamond Point.

V. & B. No. 55, 1/4 in.	0 81
V. & B. No. 55, 1/2 in.	0 48

Firmer Bevelled.

Round Nose, V. & B. No. 65, 1/4 in.	0 29
V. & B. No. 65, 1/2 in.	0 40

Socket Firmer.

Cape, V. & B. No. 50, 1/4 in.	0 31
V. & B. No. 50, 1/2 in.	0 57

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.	List less 35-40%
Yankee, for Yankee Screw Drivers	\$6 00

CLAMPS.

Adjustable, No. 100, Door (Stearns) doz.	\$22 00
--	---------

Carpenters', Steel Bar..List price plus.20%

Hose, Sherman's brass, 1/4-inch per doz.	\$0 48
Double, brass, 1/4-inch, per doz.	1 20

CLINKER TONGS.

Front Rank, each	\$1 75
Per doz.	18 00

CLIPS.

Damper, Acme, with tail pieces, per doz.	\$1 25
Non Rivet tail pieces, per doz.	25

COPPERS—Soldering.

Pointed Roofing.

3 lb. and heavier	per lb. 40c
2 1/2 lb.	45c
2 lb.	48c
1 1/2 lb.	55c
1 lb.	60c

CORD.

No. 7 Std. per doz. banks	\$11 00
No. 8 " " " "	12 60

CORNICE BRAKES.

Chicago Steel Bending, Nos. 1 to 6 B.	10%
---------------------------------------	-----

COUPLING HOSE.

Brass	per doz. \$2 20
-------	-----------------

CUT-OFFS.

Kuehn's Korrekt Kutoffs: Galv., plain, round or cor. rd. Standard gauge	40%
26 gauge	10%

DAMPERS.

"Yankee" Hot Air.

7 inch, each 20c, doz.	\$1 75
8 " " 25c, " "	2 40
9 " " 30c, " "	2 75
10 " " 32c, " "	3 00

Smoke Pipe.

7 inch, each	\$ 35
8 " "	40
9 " "	50
10 " "	60
12 " "	90

Reversible Check.

8 inch, each	\$1 50
9 " "	1 70

DIGGERS.

Post Hole.

Iwan's Split Handle (Eureka) 4-ft. Handle	per doz. \$14 00
7-ft. Handle	per doz. 35 00

Iwan's Hercules pattern, per doz.

	14 90
--	-------

DRILLS.

V. & B. Star, 12-inch Length, 1/4, 5/16 and 3/8, each	\$ 25
3/8, each	36
1, each	54
1 1/4, each	81

V. & B. Star, 18-inch Length.

5/16 and 3/8, each	\$ 33
3/8, each	45
1, each	69
1 1/4, each	1 05

EAVES TROUGH.

Milcor Galv. Crimpedge, crated	75%
--------------------------------	-----

ELBOWS—Conductor Pipe.

Milcor Galv., plain or corrugated, round flat	
Crimp, Std. gauge	65%
26 Gauge	40%
24 Gauge	10%

Square Corrugated.

Milcor Standard gauge	45%
26 gauge	30%

PROFITABLE WINTER WORK

METAL Ceiling erection is indoor work. It's work the sheet metal man should handle. It pays two profits, one on the ceiling, another on the erection. A little real selling effort will bring some good jobs your way in new buildings or old. Better write us today for full information on Berloy Metal Ceilings and how we help you sell them and erect them. Ask our nearest office for Ceiling Catalog D2 and full information.

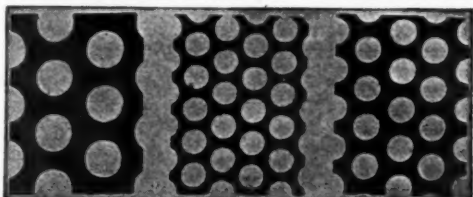
THE BERGER MANUFACTURING CO.

Canton, O. Boston New York Philadelphia Chicago St. Louis Kansas City
Minneapolis San Francisco Los Angeles Dallas Roanoke Jacksonville



BERLOY METAL CEILINGS

PERFORATED METALS



All Sizes and Shapes of Holes
In Steel, Zinc, Brass, Copper, Tinplate, etc.
For All Screening, Ventilating and Draining
EVERYTHING IN PERFORATED METAL

THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE ST.-CHICAGO, ILL., U. S. A.
NEW YORK OFFICE, 114 LIBERTY ST.

**Steel Ceilings
Side Walls and Cornices**
Only first quality material used
Many neat designs of character.

Write today for our complete catalog giving descriptions and prices.

THE W. J. BURTON CO.

Junction Ave. and Federal St. and
436 Penobscot Bldg. Detroit, Michigan

DURABLE

are

Inland Copper Alloy Sheets

**BLACK
GALVANIZED
BLUE ANNEALED**

INLAND STEEL COMPANY

38 South Dearborn St., Chicago

Works:

Indiana Harbor, Ind.
Chicago Heights, Ill.

Branch Offices

Milwaukee St. Louis
St. Paul

Uniform, Collar Adjustable.	
5 inch	Doz. \$2 00
6-inch	2 10
7-inch	2 60

WOOD FACES—50% off list.

FENCE.	
Field Fence	60%
Lawn	53%

FILES AND RASPS.	
Heller's (American)	60-5%
American	65-5%
Arcade	50-10%
Black Diamond	50-5%
Eagle	50-10%
Great Western	50-10%
Kearney & Foot	50-10%
McClellan	50-10%
Nicholson	50-10%
Simonds	60%

FIRE POTS.

Ashton Mfg. Co.	
Complete line	
Firepots and Torches	52%
Otto Bernz Co.	
No. 1 Furn. Gasolene with large shield, 1 gal.	\$ 6 75
No. B Furn. Kerosene, 1 gal.	15 12
No. 10 Brazier, Kerosene or Gasolene, 10 gals.	47 52
No. 5 Torch, Gasolene or Kerosene, 1 pt.	7 92
No. 83 Torch, Gasolene, 1 quart	5 40
No. 86 Torch, Gasolene, 1 pt.	4 05
Clayton & Lambert's.	
East of west boundary line of Province of Manitoba, Canada, No. Dakota, So. Dakota, Nebraska, Kansas, Oklahoma, Amarillo, San Angelo and Laredo, Texas	52%
West of above boundary line.	48%
Geo. W. Diener Mfg. Co.	Ea.
No. 62 Gasolene Torch, 1 qt.	\$ 5 55
No. 6250, Kerosene or Gasolene Torch, 1 qt.	7 50
No. 10 Tinnors' Furn. Square tank, 1 gal.	12 60
No. 15 Tinnors' Furn. Round tank, 1 gal.	12 00
No. 21 Gas Soldering Furnace	3 60
No. 110 Automatic Gas Soldering Furnace	10 50
Double Blast Mfg. Co.	
Gasolene, Nos. 25 and 35	60%
Quick Meal Stove Co.	
Vesuvius, F.O.B. St. Louis	30%
(Extra Disc't. for large quantities)	
Chas. A. Hones, Inc.	
Buzzer No. 1	\$ 9 00
" " 2	12 00
" " 22	13 50
" " 42	15 00
" " 43	19 00

FREEZERS—ICE CREAM.

Peerless and Alaska	
1 quart	\$2 95
2 quart	3 45
3 quart	4 10
White Mountain	
1 quart	\$3 50
1 quart	4 90
2 quart	5 70

GALVANIZED WARE.

Pails (Competition), 8 qt.	\$1 85
10-qt.	2 10
12-qt.	2 30
14-qt.	2 57
Wash tubs, No. 1	\$6 25
No. 2	7 00
No. 3	8 25

GARAGE DOOR HARDWARE.

Stanley	All net
Gauges.	
Marking, Mortise, etc.	Nets
Wire.	
Disston's	25%

GIMLETS.

Discount	65% and 10%
----------	-------------

GLASS.

Single Strength, A and B	all sizes
Double Strength, A, all sizes	84%

GREASE, AXLE.

Frazers'	
1-lb. tins, 36 to case, per case	\$ 4 70
3-lb. tins, 24 to case, per case	7 80
5-lb. tins, 12 to case, per case	7 20
10-lb. tins, per dozen	10 40
15-lb. tins, per dozen	13 80
25-lb. tins, per dozen	19 80

HAMMERS, HANDLED.

All V. and B.	Each, net
Blacksmiths' Hand, No. 0, 26-oz.	\$1 00
Engineers' No. 1, 26 oz.	1 00
Farrier's, No. 7, 7-oz.	93
Machinists', No. 1, 7-oz.	78

Nail.

Vanadium, No. 41, 20-oz. each	1 59
Vanadium, No. 41½, 16-oz. each	1 59
V. & B., No. 11½, 16-oz. each	1 01
Garden City, No. 11½, 16-oz., each	75
Tinner's Riveting, No. 1, 8-oz., each	79
Shoe, Steel, No. 1, 18-oz., each	65
Tack.	
Magnetic.	
No. 5, 4-oz., each	81

HAMMERS, HEAVY.

Farrier's, No. 10, 10-oz.	\$1 01
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HANDLES.

Axe.	
Hickory, No. 1, per doz.	4 00
Hickory, No. 2, " "	3 00
1st quality, second growth	6 00
Special white, 2nd growth	5 00

Chisel.

Hickory, Tanged, Firmer assorted	per doz. 55c
Hickory, Socket, Firmer, Assorted	per doz. 70c
File	per doz. \$1 20
Hammer and Hatchet.	
No. 1 per doz.	\$0 90
Second Growth hickory, per doz.	1 50

Soldering.	
Per doz.	\$2 40

HANGERS.

Conductor Pipe.	
Milcor Perfection Wire	25%
Eaves Trough.	
Steel hangers	30%
Triple Twist wire	10%
Milcor Eclipse Wire	20%
Milcor Triplex Wire	15%
Milcor Milwaukee Extension	15%
Milcor Steel (galv. after forming) List plus	12½%
Milcor Selflock E. T. Wire, List plus	40%

HASPS.

Hinge, Wrought, with staples.	Net
-------------------------------	-----

HATCHETS.

V. and B. Supersteel.	Each
Broad, No. 1, 24-oz.	\$1 43
Half, No. 1, 15-oz.	1 25
Half, No. 3, 27-oz.	1 37
Claw, No. 1, 19-oz.	1 31
Flooring, No. 1, 20-oz.	1 43
Shingling, No. 1, 17-oz.	1 20
Lathing, No. 1, 14-oz.	1 20
Lathing, No. 2, 17-oz.	1 25

Vanadium Steel.	
Half, No. 62, 22-oz.	\$1 82
Underhill Pattern Lathing, 9 row, 19 oz.	2 29

HINGES.

Heavy Strap, in Bundles.	
4 inch, dozen prs.	\$1 12
5 " " "	1 57
6 " " "	1 93
8 " " "	3 21
Extra Heavy T in Bundles.	
4 inch, dozen prs.	\$1 74
5 " " "	1 85
6 " " "	2 31
8 " " "	3 95

HOES.

Garden	Net
--------	-----

HOOKS.

Box.	
V. and B. No. 9, each	\$0 26
Conductor.	
Milcor	
"Direct Drive" Wrought Iron for wood or brick	15%
Cotton.	
V. and B. No. 8, each	24
Hay.	
V. and B. No. 1, each	26

Bar Meat.

V. and B. No. 26, ¾"	09
each	
V. and B. No. 28, ½"	16
each	

Screw Meat.

V. and B. No. 2, per gro.	6 50
Butchers' "S."	
V. and B. No. 6, each	08
V. and B. No. 8, each	11

HOSE.

Per Ft.	
¾-in. 2 ply molded	9½c to 12¼c
¾-in. cord	8½c to 10c
¾-in. wrapped	13½c

HUMIDIFIERS.

"Front-Rank," Automatic.	
In single lots	50%
In lots of 10 or more	50-5%
In lots of 25 or more	50-10%
Vapor pans, etc., each	50%

IRONS.

Sad.	
Genuine Mrs. Potts, nickel plated, per set	\$1 55
Asbestos No. 70, per set.	2 10
Asbestos No. 100, per set.	2 30
E. C. Stearns'.	
No. OA Corner, doz. sets	\$2 50
No. OB " "	2 75

KNIVES.

Butcher.	
Beechwood Handles, 6-inch blade	25%
Beechwood Handles, 7-inch blade	25%
Beechwood Handles, 3-inch blade	25%
Cooper's Hoop	25%
Drawing.	
Standard	25%
Adjustable	25%
Barton's Carpenters'	25%
Hay.	
Iwan's Solid Socket	25%
Heath's	25%
Iwan's Sickle Edge	25%
Iwan's Imp'd Serrated	25%
Hedge.	
Challenge	25%
Disston's No. 1	25%
Putty.	
Common	25%
Lander's	25%
Scraping.	
Beech Handles	25%
Lander's	25%

KNOBBS.

Door.	
Mineral	per doz. \$2 00
Porcelain	" 2 00
Jet	" 2 00

LADDERS.

Step.	
Common, per ft.	28c
Common, with Shelf, add 10c	
IXL	34c
Challenge, 6 to 9 ft.	55c
10 to 16 ft.	60c
Kant-Break, per lineal ft.	75c

LANTERNS.

Per doz.	
Monarch tin, hot blast	\$ 8 25
Dietz No. 2 cold blast	13 00
Best tubular	8 25
Competition lanterns No. 0 tubular	6 90

LAWN MOWERS.

12-inch	\$5 20
16-inch	5 85

Ball Bearing.

4 blade, adjustable bearing.	
14"	\$5 20
16"	7 80

LEATHER BELTING.

From No. 1 Oak Tanned Butts.	
Extra heavy, 18-oz.	35%
Heavy, 16-oz.	40%
Medium, 14½-oz.	40%
Light, 13-oz.	50%

LEATHER LACING.

Cut, strictly No. 1	45%
---------------------	-----

LEVELS.

Disston, No. 28 Asst.	\$22 05
" No. 18, 20 in., each	1 83
" No. 22, 24 in., each	2 40
" Shafting, 6 in.	19 80
" " 6 in. gr. glass	24 20
" No. 1 Asst.	5 75
" No. 2 Asst.	12 40
" 24-26 in., each	1 02
" 28-30 in., each	1 00

LIFTERS.

Stove Cover.	
Coppered	per gro. \$6 00
Alaska	4 75

LOCKS.

Barn Door.	
No. 60 Stearns'.	per doz. \$11 00
No. 80	20 00

MALLETS.

Carpenters'.	
Fibre Head No. 2, per doz.	\$12 00
" No. 3, " "	15 50
" No. 3½, " "	20 50
Round Hickory, per doz.	\$3 00—5 00
Tinnors'.	
Hickory	per doz. \$2 25

MATS.

Door.	
National Rigid	5 & 10 & 5%
Acme Steel Flexible	50%

MITRES.

Galvanized steel mitres, and caps, end pieces, outlets	30%
Milcor	
Galv. one piece stamped	40%

MOPS.

Cotton, Star (Cut Ends).	
Pounds 12' 15' 18' 24'-3-oz.	
Per doz. \$4 00 4 35 5 50 7 00	
Enterprise	16%
Parker	50 & 5%

NAILS.

Cut Steel	\$4 70
Cut Iron	4 70
Wire.	
Common	3 20
Cement Coated	3 40

NETTING, POULTRY.

Galvanized before weaving	45-10%
Galvanized after weaving	45%

NIPPERS.

Nail Cutting.	
V. & B. No. 30	73c
Double Duty.	
V. & B. No. 60	76c

Hoof.	
Heller's	40 & 10%
V. & B. No. 52, each	\$2 25

NOZZLES.

Hose.	
Diamond	5 75
Magic	per doz. \$9 50

OILERS.

Chase Pattern.	
Brass and Copper	10%
Zinc Plated	40 & 5%
Railroad.	
Brass	20 & 5%
Coppered	50 & 5%

Steel.	
Copper Plated	70 & 5%

OPENERS.

Delmonico	per doz. \$1 30
Never Slip	" 60

Crate.	
V. & B.	per doz. \$7 25—11 00

Everything Used in Sheet Metal Work



A brand almost as old as the tin-plate industry in this country—it identifies a product that has stood the test of time.

Supplied in IC and IX thickness; 112 Sheets per case; 20x28; the IC gauge will weigh about 246 lbs. net.

Since 1872

We offer the trade a thoroughly dependable service based on over 50 years of experience in supplying the needs of Sheet Metal Workers and Furnacemen. Our constant growth—an ever-increasing list of satisfied customers—testify to the quality of Osborn Products.

Catalog No. 24, ready for distribution very soon, will be sent at your request.

The J. M. & L. A. Osborn Co.
CLEVELAND OHIO

VENTILATORS

We carry a full line of the below named well known ventilators:

EARLE
PERFECTION
HERCULES

IWAN'S
STANDARD
"STAR"

"ROYAL"
GLOBE
UNO

AMERICAN-LARSON

"BEST"

We can make prompt shipments on your orders for anything in the sheet metal line.

Try us—write for catalog today

BERGER BROS. CO.

229 to 237 ARCH STREET

WAREROOMS AND FACTORY: 100 TO 114 BREAD STREET
PHILADELPHIA, PA.

AREX

MORE PROFIT—LESS WORK

AREX Ventilators are built in tremendous quantities and are therefore low in price in spite of excellent design and high-grade construction. Correct design gives them three times the capacity of ordinary ventilators. Extensive advertising build large sales—at a better profit for you.

AREX COMPANY

J. C. Kernchen, Pres.

1581 Conway Building

Chicago

THE ORIGINAL SIPHONAGE VENTILATOR

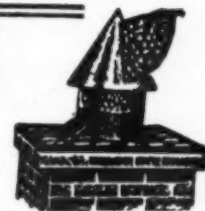


"THE STANDARD"
VENTILATOR and CHIMNEY CAP

DOES away with high stacks, swings freely in the slightest breeze and positively cures down-drafts. The strongest and most efficient combination to be had. Has no equal for chimney purposes. All jobbers sell them—write your jobber or us for prices and catalog today.

Manufactured by

STANDARD VENTILATOR CO.
LEWISBURG, PA.



Efficient, Durable, Economical, The Most in Price and Service
ÆOLUS VENTILATORS

Made in all sizes of all metals. We make quick shipments.

ÆOLUS DICKINSON CO.

Vent Makers Since 1888

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Telephone: Lafayette 1862-1863

CHICAGO, ILLINOIS

CONSTANT



ÆOLUS
PULL

PAISLS.	
Cream.	
14-qt. with gauge.	per doz. \$9 50
18-qt. without gauge.	per doz. 11 00
20-qt. without gauge.	per doz. 11 75

Sap.	
10-qt., IC Tin	per doz. \$4 00
12-	5 50

Stock.	
Galv. qts. 14	16
Per doz. \$9 75	10 75 12 75 14 50

Water.	
Galvanized qts. 10	12
Per doz. \$5 75	6 50 7 25

PASTE.	
Asbestos Dry Paste:	
200-lb. barrel	\$15 00
100-lb. barrel	8 00
35-lb. pail	3 25
10-lb. bag	1 00
5-lb. bag	55
2 1/2-lb. cartons	30

PINCERS.	
All V. & B.	
Carpenfers, cast steel,	
No. 6	8
No. 10	12
Each \$0 43	\$0 52 \$0 61 \$0 71
Blacksmiths, No. 10	\$0 64

PIPE.	
Conductor	
"Interlock" Galvanized.	
Crated and nested (all gauges)	60-20%
Crated and not nested (all gauges)	60-15%
Square Corrugated A and B and Octagon.	
29 Gauge	60-10%
28 "	60-10%
26 "	60-10%
24 "	60-10%

"Interlock."	
Crated and nested (all gauges)	60-20%
Prices for Galvanized Toncan Metal, Genuine O. H. Iron, Lyonmore Metal and Keystone C. B. on application.	

Stove.	
Per 100 joints	
26 gauge, 5 inch E. C. nested	\$17 00
26 gauge, 6 inch E. C. nested	17 00
26 gauge, 7 inch E. C. nested	19 00
28 gauge, 5 inch E. C. nested	14 00
28 gauge, 6 inch E. C. nested	15 00
28 gauge, 7 inch E. C. nested	17 00
30 gauge, 5 inch E. C. nested	12 00
30 gauge, 6 inch E. C. nested	13 00
30 gauge, 7 inch E. C. nested	15 00

T-Joint Made up,	6-inch	per 100	35 00
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Furnace Pipe.	
Double Wall Pipe and Fittings	
Single Wall Pipe, Round	40-10%
Pipe Fittings	40-10%
Galvanized and Black Iron Pipe, Shoes, etc.	40-10%
Milcor Galvanized	40%

Stanley Iron Bench	Net
--------------------	-----

PLIERS.	
(V. & B.)	
Nut, No. 3, each	\$2 60
" No. 5, each	64
" No. 25, each	69
Gas, No. 7, each	55
" No. 8, each	61
" No. 12, each	87

Lining or Crimping.	
No. 35, each	64

Button's Pattern.	
No. 6 each	61
No. 8 each	74

Double Duty, No. 108	50
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POINTS, GLAZIERS.	
No. 1, 2 and 3, per doz. pkgs.	65c

POKERS, STOVE.	
Wrt Steel, str't or bent,	per doz. \$0 75
Nickel Plated, coil handles	1 10

POKERS, FURNACE.	
Each	\$0 50

PULLEYS.	
Furnace Tackle	per doz. \$0 60
per gross	6 00
Screw (en-cased)	per doz. \$0 85

Ventilating Register.	
Per gross	\$9 00
Small, per pair	0 30
Large, per pair	0 50

PUNCHES.	
Machine.	
V. & B., No. 11-13, 1 1/2 x 6	\$0 19
V. & B., No. 90, 3/4 x 9	27
V. & B., No. 10, 3/4 x 10	29
V. & B., No. 1-6, 1 1/2 x 6	12

Center.	
V. & B., No. 50, 3/4 x 4	\$0 14

Belt.	
V. & B., No. 101-103	\$0 24
V. & B. No. 25, ass't.	3 80
V. & B., No. 25, ass't.	3 80

Samson Line.	
No. 1 Hand	Doz. lots or less 40%
No. 2 Hand	3 doz. lots Less 40 & 5%
No. 4 Hand	6 doz. lots or more Less 50%
No. 3 Bench	Less than doz. lots Less 25%
	Doz. lots or more Less 40%

Extra Punches and Dies for Samson:	
No. 1 Hand	Less than doz. lots Less 25%
No. 2 Hand	Doz. lots Less 33 1/3%
No. 4 Hand	3 doz. lots Less 40%
No. 3 Bench	6 doz. lots or more Less 40 & 10%

PUTTY.	
Commercial Putty, 100-lb. kits	\$3 55

QUADRANTS.	
Malleable Iron Damper	10%

FLOOR REGISTERS AND BORDERS.	
Cast Iron	25%
Steel and Semi-Steel	40%
Baseboard	40%
Adjustable Ceiling Ventilators	40%

Register Faces—Cast and Steel	
Japanned, Bronzed and Plated, 4x6 to 14x14	40%
Large Register Faces—Cast, 14x14 to 38x42	60%
Large Register Faces—Steel, 14x14 to 38x42	65%

ROOFING.	
Per Square	
Best grade, slate surf. prep'd	\$1 55
Best talc surfaced	2 20
Medium talc surfaced	1 50
Light talc surfaced	95
Red Rosin Sheetting, per ton	\$72 00

ROPE.	
Cotton.	
Sisal,	
1st Quality, base	13 1/2c
No. 2	12 1/2c

Manilla.	
1st Quality standard brands	15 1/2c
No. 2	14 1/2c
Hardware Grade, per lb.	12 1/2c

SAWS.	
Butchers'.	
Atkins No. 2, 14-in.	\$12 75
" No. 2, 18-in.	14 30
" No. 7, 16-in.	15 85
" No. 2, 22-in.	15 92
" No. 7, 20-in.	18 05
" No. 7, 24-in.	20 20
" No. 7, 28-in.	22 35

Compass.	
Atkins No. 2, 10-in.	\$ 5 45
" No. 10, 10-in.	5 60
Blades, No. 2, 10-in	3 25
" No. 2, 10-in.	2 30

Cross-Cut.	
Atkins No. 221, 4-ft.	\$3 03
" No. 221, 6-ft.	4 45
" No. 221, 8-ft.	6 07

Hand.	
Copper Burrs only	30%
" No. 96, 20-in.	21 70

Hand and Rip.	
Atkins No. 54, 20-in.	\$19 50
" No. 54, 26-in.	24 40
" No. 53, 16-in.	18 10
" No. 53, 20-in.	22 90
" No. 53, 24-in.	26 60
" No. 53, 28-in.	31 45
" No. 53, 30-in.	34 15

Keyhole.	
Atkins No. 1 complete	\$3 10
No. 2 complete	3 70

Miter Box.	
Atkins No. 1, 4x20	\$32 65
" No. 1, 5x22	38 00
" No. 1, 6x22	42 20

Pruning.	
Atkins No. 20, 12-in.	\$ 8 45
" No. 10, 16-in.	18 15

Wood.	
Atkins No. 202	\$ 7 19
" No. 318	8 75
" No. 906	15 50
" No. 1509	16 56

SCRAPERS.	
Box.	
No. 6, six blades each	25c
Hog.	
No. 6, each	25c
Floor (Stearns).	
No. 10, each	\$11 50

SCREEN DOOR HINGES.	
Cast Iron	gross \$13 00
Steel	9 50

SCREWS.	
Wood.	
F. H. Bright	80%
R. H. Blued	78%
F. H. Jap'd	74%
F. H. Brass	76%
R. H. Brass	74%

Sheet Metal.	
No. 7, 1/2 x 1/4, per gross	\$0 55
No. 10, 3/4 x 1/16, per gross	75
No. 14, 1/2 x 1/4, per gross	90

SCREW DRIVERS.	
Uncle Sam Standard Head.	
2 inches, each	\$ 45
5 inches, each	52
8 inches, each	68
12 inches, each	1 02

Uncle Sam Insulated Head.	
3 inches, each	\$ 48
5 inches, each	57
8 inches, each	76
12 inches, each	1 14

SETS.	
Nail.	
V. & B.	
No. 100, in cardboard boxes	doz. \$1 55
No. 100, in wooden boxes	doz. 1 58
No. 30, assorted	doz. 39
No. 5, in cardboard boxes	doz. 1 25
No. 5, in wooden boxes	doz. 1 30

Rivet.	
V. & B.	
Farmers'	per doz. \$0 15
Tinners' 3-4	0 40
" 00-0	0 00
Saw.	
Atkins No. 10	per doz. \$3 50
" No. 12	6 20

SHEARS.	
Nickel Plated, Straight,	
" "	Per Doz. \$12 90
" "	7" 14 85
" "	8" 16 50
Japanned, Straight,	6" 11 00
" "	7" 12 45
" "	8" 13 80

SHEARS, TINNERS' & MACHINISTS.	
Viking	\$22 00

Lennox Throatless.	
No. 18	35%
Shear blades	10%
(F.O.B. Marshalltown, Iowa.)	

Peerless Steel Squaring Foot Power.	
No. 1-30", 18 ga. cap.	15%
No. 2-36", 18 ga. cap.	15%
No. 4-52", 18 ga. cap.	15%
No. 10-120", 22 ga. cap.	15%
No. 4A-52", 16 ga. cap.	15%

Cast Iron Foot Power.	
No. 01, 30", 18 ga. cap.	15%

Power Driven.	
(No. 100 Series, 2 Shaft Drive.)	
No. 142-42", 18 ga. cap.	15%
(No. 200 Series, 2 Shaft Underneath Drive.)	
No. 242-42", 14 ga. cap.	15%
(No. 300 Series, 3 Shaft Underneath Drive.)	
No. 342-42", 10 ga. cap.	15%
No. 372-72", 10 ga. cap.	15%
(No. 500 Series, 3 Shaft Underneath Drive.)	
No. 596-96", 10 ga. cap.	15%
(No. 600 Series, 3 Shaft Underneath Drive.)	
No. 6120-120", 3/16" cap.	15%

SHINGLES.	
Zinc (Illinois)	Per Square \$15 00

SHOES.	
Milcor.	
Galv. Std. Gauge, Plain or corg. round flat crimp	65%
26 gauge round flat crimp	40%
24 gauge round flat crimp	10%
Conductor	65%

SHOVELS AND SPADES.	
Coal.	
Hubbard's.	
No. A	B
1	\$16 00 15 10 14 45 13 70
2	16 35 15 60 14 85 14 10
3	16 75 16 00 16 25 14 40
4	17 10 16 35 16 60 14 85

Post Drains & Ditching.	
Hubbard's.	
Size	A
14"	\$17 15 \$16 40 \$15 65
16"	17 50 16 75 16 00
18"	17 85 17 10 16 85
20"	18 20 17 45 16 70
22"	18 55 17 80 17 05

Alaska Steel.	
D-Handle	per doz. \$3 50
Long Handle	3 00

SIFTERS.	
Genuine Hunters, doz.	\$2 50

SKATES.	
Ice, Men's and Boys'.	
Key Clamp—rocker—bright finish	
Key Clamp—rocker—nickel finish	1 10
Kay Clamp—rocker—pol. steel	1 35
Kay Clamp—rocker—pol. steel	4 75
Skate outfit	5 00

Women's and Girls'.	
1/2" Key Clamp—rocker	\$1 31
hockey	1 35
Ice Skate outfit	5 00

Roller.	
Ball Bearing—Boys'	\$1 55
Ball Bearing—Girls'	1 65

SHEET COPPER

FOR ROOFING and CORNICE WORK

ALSO
SPECIAL COLD ROLLED RESQUARED STRIP
Ideal for Conductor, Gutters, Valleys, Flashings,
Gravel Stops, etc.



MERCHANT & EVANS CO.
PHILADELPHIA

NEW YORK

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KANSAS CITY

WHEELING

Quality & Beauty IN ART METAL CEILINGS AND SIDE WALLS

QUALITY—only first quality material is used in making FRIEDLEY-VOSHARDT ART METAL CEILINGS AND SIDE WALLS.

BEAUTY—is necessary for the complete and lasting satisfaction of your customers.

Having one of the finest equipped sheet metal plants in the country and employing only skilled workers enables us to serve you with **QUALITY** goods having the **BEST DESIGNS**.

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FRIEDLEY-VOSHARDT Co.

OFFICE
733-737 S. Halsted St.

FACTORY
761-771 Mather St.

CHICAGO, ILLINOIS



TREADLE SHEAR

This TREADLE GAP SHEAR is made in all standard sizes for No. 14 and lighter gauge sheets. With it, sheets can be squared, trimmed or slit.

We make a complete line of shears, punches and bending rolls, all sizes for hand or belt drive. Write for Catalog "S."

BERTSCH & COMPANY

Cambridge City, Ind.

C. G. HUSSEY & CO.
Rolling Mills and Office, PITTSBURGH, PA.

Manufacturers of
SHEET COPPER, BOTTOMS, ROLL COPPER, TINNED AND
POLISHED COPPER, NAILS, SPIKES, RIVETS, CONDUCTOR
PIPE, EAVES TROUGH, ELBOWS, SHOES, MITRES, ETC.
Branch Warehouses in New York, Chicago and St. Louis
Member, Copper & Brass Research Association

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CORTRIGHT METAL SHINGLE

Dipped in Molten Zinc after being cut and formed.

This gives

Cortright Hand Dipped Shingles

a coating on all edges as well as both sides. We will be glad to send our book, "Concerning That Roof."

It describes all the various patterns we make and all the different kinds of materials used.

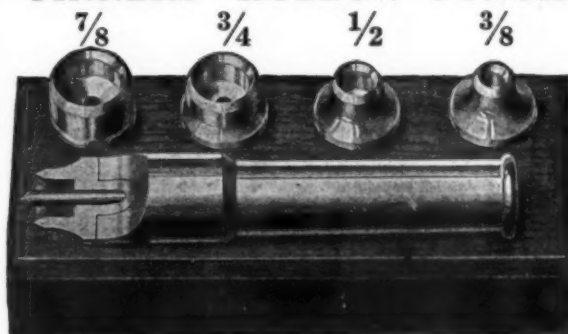
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Philadelphia

METAL ROOFING CO.
Chicago

STANDARD

SINCE 1887

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Rockford, Illinois

MARSHALLTOWN

Throatless Shears



HERE is a machine that will do all your sheet cutting. It takes sheets of any size and does accurate work quickly. It is our No. 18 Hand Power Shear, the size for the average shop. It is high grade throughout, being made of the strongest and toughest metals.

It sells at a price which makes it possible for you to own one NOW.

Covered By Patent
No. 1020508

Address Dept. A. A. and ask for our catalog and price list covering our entire line.

MARSHALLTOWN MFG. CO., Marshalltown, Iowa

SNIPS, TINNERS'.

Clover Leaf	.....40 & 10%
National	.....40 & 10%
Star	.....50%
Milcor	.....Net

SQUARES.

Steel and Iron	.....Net
(Add for bluing, \$3.00 per doz. net.)	
Mitre"
Try"
Try and Bevel"
Try and Mitre"
Fox's	.....per doz. \$6 00
Winterbottom's	.....10%

STAPLES.

Blind.	
Barbed	.....per lb. 21c@22c
Butter, Tub.	.....16@19c
Fence—	
Polished	.....per 100 lbs. \$5 45
Galvanized	.....6 15
Netting.	
Galvanized	.....per 100 lbs. \$6 54
Wrought.	
Wrought Staples, Hasps and	
Staples, Hasps, Hooks and	
Staples, and Hooks and	
Staples	.....50 & 10%
Extra heavy	.....35%

STONES.

Axe.	
Hindustan	.....per lb. New Nets
More Grite"
Washita"

Emery.	
No. 126	.....per doz. New Nets

Oil Mounted.	
Arkansas Hard	
No. 7	.....per doz. New Nets
Arkansas Soft"
Washita No. 717"

Oil—Unmounted.	
Arkansas Hard per lb. New Nets	
Arkansas Soft"
Lily White"
Queer Creek"
Washita"

Scythe.	
Black Diamond per gro. New Nets	
Crescent"
Green Mountain"
LaMolle"
Extra Quinine"
bog"
Red End"

STOPS, BENCH.

No. 10 Morrill pat-	
tern	.....per doz. \$11 00
No. 11 Stearns pat	
tern	.....10 00
No. 15 Smith pat-	
tern	.....7 00

STOPPERS, FLUE.

Common	.....per doz \$1 10
Gem, No. 1	.....1 10
Gem, flat, No. 3	.....1 00

STRETCHERS.

Carpet.	
Bullard's	.....per doz. \$3 90
Excelsior	.....5 25
Malleable Iron	.....70
Perfection	.....6 30
King	.....4 50

Wire.	
O. S. Elwood, No. 1 per doz. Nets	
O. S. Elwood, No. 2"

SWIVELS.

Malleable Iron	.....per lb. \$0 10
Wrought Steel	.....per gro. \$4 50

TACKS.

Bill Posters' 6-oz., 25-lb.	
boxes, per lb.	.....15c
Upholsterers' 6-oz., 25 lb.	
boxes, per lb.15½c

TAPES, MEASURING.

Asses' SkinList & 40%
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THERMOMETERS.

Tin Caseper doz 80c & \$1 25
Wood Backs2 00 & 12 00
Glass13 00

TIES.

Bale.	
Single Loop, carload	
lots	.....75 & 7%
Single Loop, less than	
car lots	.....70 & 15%

TRAPS.

Mouse and Rat.	
Sure Catch Mouse Traps	.....\$ 2 50
Vim Mouse Traps	.....2 50
Short Stop Mouse Traps	.....2 40
Wood Choker Mouse	
Traps, 4 hole	.....11 25

Per Doz.

Sure Catch Rat Traps	.....\$ 0 85
Dead Easy Rat Traps	.....0 90
Packed in One Bushel Band Stave	
Baskets.	

List per Bushel

Sure Catch Mouse Traps	
(360 Traps)	.....\$ 6 25
Short Stop Mouse Traps	
(360 Traps)	.....6 00
Sure Catch Rat Traps (54	
Traps)	.....3 90
Short Stop Rat Traps (54	
Traps)	.....3 75

Assorted Mouse and Rat Traps.

List per Bushel.

Sure Catch (216 Mouse	
Traps and 26 Rat	
Traps)	.....\$5 65
Short Stop (216 Mouse	
Traps and 26 Rat	
Traps)	.....5 40

TROWELS.

Cement.	
Atkins No. 6	.....\$19 50
No. 9	.....25 50

TWINE.

White Cotton.	
Eureka, 4-ply	.....per lb. 30c

Jute.	
Cattle Wire — Galvanized	
catch weight spool, per	
3-ply and 6-ply Bale Lots22½c

Milcor	
Galv. formed or roll60%

VENTILATORS.

Standard30 to 40%
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VISES.

No. 700 Hand,	
Inches4½ 5 5½
Doz.\$11 15 13 00 14 85
No. 701. In.5 6
Doz.\$11 15 13 00 16 70
No. 1, Genuine Wentworth,	
Noiseless Saw...per doz.	.....9 25
No. 3, Genuine Wentworth,	
Noiseless Saw...per doz.	.....12 75
No. 500, All Steel Folding	
Saw	.....per doz. 16 00

WASHERS.

Over ¾ in. barrel lots	
per 100 lbs.	.....\$6 25
Iron and Steel.	
In. 5/16 ¾ 1½ 2 2½	
10¼c 9¼c 7¼c 1¼c 7 2/5c	

WEATHER STRIPS.

Metallic Stitched.	
½ in., per 100 ft.	.....\$1 80
¾ in., per 100 ft.	.....2 20
Wood and Felt.	
¾ in., per 100 ft.	.....\$1 56
¾ in., per 100 ft.	.....1 56

WEIGHTS.

Hitching	.....per lb. Nets
Sash—f. o. b. Chicago	
Smaller lots, per ton	.....\$47 50

WHEEL BARROWS.

Common Wood Tray	.....\$3 75
Steel Tray, Competition	.....4 50
Steel leg, garden	.....6 00

WIRE.

Plain annealed wire, No. 8	
per 100 lbs.	.....\$3 70
Galvanized barb wire, per	
100 lbs.	.....4 10
Wire cloth — Black painted,	
12-mesh, per 100 sq. ft.	.....2 35
Cattle Wire—galvanized	
catch weight spool, per	
100 lbs.	.....4 60
Galvanized Hog Wire, 80 rod	
spool, per spool.	.....3 98
Galvanized plain wire, No. 9,	
per 100 lbs.4 15
Stove Pipe, per stone.1 10

WOOD FACES.

50% off list.	
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WRENCHES.

Coes Steel Handle, 6-in.40-10%
" " " 8-in.40-10%
" " " 10-in.40-10%
" " " 12-in.40-10%
Coes Knife-Handle, 6-in.40-10%
" " " 8-in.	.....40-10%
" " " 10-in.	.....40-10%
" " " 12-in.	.....40-10%
Coes All Patterns	.....40-10%

WRINGERS.

No. 790, Guarantee per doz.	.....\$55 50
No. 770, Bicycle	.....52 50
No. 670, Domestic48 50
No. 110, Brighton43 50
No. 750, Guarantee55 50
No. 740, Bicycle52 50
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